ATTITUDES TOWARD BLINDNESS AND BLINE PEOPLE AMONG THEOLOGICAL AND EDUCATION STUDENTS

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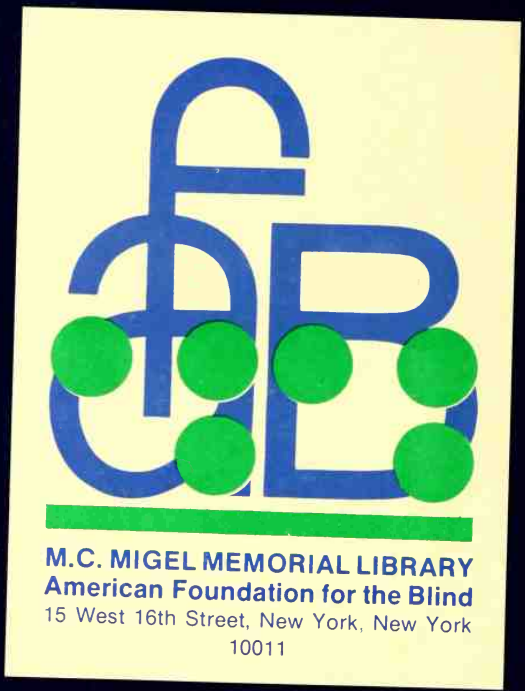
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ATTITUDES TOWARD BLINDNESS AND BLIND PEOPLE AMONG THEOLOGICAL AND EDUCATION STUDENTS

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Submitted to the Graduate Faculty in the School of Education in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

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I. THE PROBLEM

A. Introduction

"There is general agreement that it is not the handicap in itself which causes personality maladjustments, but the attitudes of others in the social environment that influence the development and behavior of the blind child," (Wolman, 1958, p. 128). This has been supported by other authorities (Cowen, Underberg, Verrillo, & Benham, 1961; Lukoff, 1972; Lukoff & Whiteman, 1961; Monbeck, 1973; Whiteman & Lukoff, 1962, 1963, 1964a; Wright, 1960).

It becomes important, therefore, to understand these attitudes in education and rehabilitation for the blind. An aspect of this understanding involves studies of attitudinal variation and similarity among different social groupings and among those differing in educational backgrounds. This study is concerned with investigating attitudes of education students and of theological students toward blind people because these two groups among others are presumed to influence education and rehabilitation for the blind. "More than 60% of the visually handicapped children registered with the American Printing House for the Blind attend public schools, whereas 40% are placed in residential schools," (Lowenfeld, 1973, p. 24). Lowenfeld (1956, 1973) identified three main factors which favored public school education for the blind: (a) increasing integration of blind into society; (b) the American high regard for public education, and (c) growing recognition of family life. Blind children and youth attending public schools receive their education from

regular teachers with the help of special teachers. Therefore, understanding attitudes of education students toward blindness is of interest.

Historical and cultural investigations have reported that blind people came to be considered special wards of the church because of the Christian ideals of charity and pity. In the early Christian era (4th Century) and later on (16th and 17th Centuries) many institutions and services for the blind were initiated and supported because they were an expression of Christian charity (Monbeck, 1973). Even now some services for the blind in the United States and abroad are church-related and ministers are frequently involved in work for the blind directly or indirectly. For example, the first service for the blind in Korea was initiated by an American missionary in 1897 (Seoul National School for the Blind, 1965). In addition, theologians have often played an important role in the adjustment process of newly blinded individuals (Williams, 1965). Williams further suggested six areas of possible help from the church: (a) the pastor as a counselor, (b) the spiritual resources of the community of faith, (c) placement, (d) church-supported institutions, (e) financial help, and (f) public relations.

Cultural attitudes can be transmitted directly to the individual since attitudes are learned (Monbeck, 1973; Payne, 1974). Theological and education students, by dint of exposure to common cultural values and stereotypes, may share a good many feelings and ideas centering about blindness. On the other hand, differences may exist between these two groups due to their subcultural differences such as educational backgrounds and religious orientation.

B. Review of Related Literature

The hypotheses for this study were generated from a review of the literature. First, the literature dealing with the attitudes of people toward blindness was examined and then, the literature dealing with methodologies for measuring attitudes and methodologies used in the measurement of attitudes toward blindness was reviewed.

Attitudes Toward Blindness and Blind People

Wright stated that people put disabled persons either in the inferior status position or in the salutary status position (Wright, 1960). This may have implied that people form opinions and maintain attitudes about blind people based on the fact of disability, in the absence of any other information about the individual. The majority of the literature and research studies reviewed in the areas of attitudes toward blindness indicated blind persons elicited some type of inferior status reaction from sighted people. Some investigations seemed to indicate that blind people elicited salutary status reaction. Therefore, the literature reviewed was organized according to whether the conclusions and statements supported the existence of inferior status positions or salutary status positions.

1. Inferior Status Position

Inferior status position reflected by society. According to Monbeck (1973) one of the common reactions of sighted people to blind persons is a feeling of pity and sympathy, a feeling often expressed in highly sentimental terms. Charity, pity, and sympathy were "a joyful boon" to the blind people who wandered over Europe three, five, and ten centuries ago (Lukoff, 1972, p. 4). In fact, pity was historically about the best and most that blind people could expect. It was,

nevertheless, an improvement over the kind of attitude that condoned infanticide which prevailed earlier (Monbeck, 1973). However, in a new era, pity and sympathy that were formerly positive are now seen as negative because they serve to direct and shape blind persons in directions that many can no longer accept (Lukoff, 1972).

In the American society, the "legally blind" have been more favored by state laws relating to physical disability than any other disabled group (Barker, Wright, Meyerson, & Gonick, 1953). More federal laws have also been passed relating to blindness than for any other disability groups. As early as 1958, fifty such pieces of legislation were summarized in a report by Lende (1958).

Sommer's study (1944) reflected a notion that blind children were inferior because blindness was a punishment for a sin. She used a somewhat intuitive approach and outlined some major attitude patterns observed in interviews with parents of blind children. These included acceptance of the child's handicap, denial of it, overt rejection, disguised rejection, and overprotection. By and large, the first two of these patterns she regarded as desirable modes of reaction, while the last three were seen as undesirable...Any parents of blind adolescents may have regarded blindness as a symbol of punishment, been fearful of being suspected of having a social disease, had guilt feelings due to violations of a moral or social code, or felt it to be a personal disgrace to have borne a blind child. She did not subject these findings to statistical analysis, nor did she attempt to establish their reliability through examination of the data by more than one person. The findings might be regarded as impressions pending further investigation utilizing more rigorous metholodogy.

Some research studies showed existence of an attitude that blind people are helpless (Gowman, 1957; Lukoff & Whiteman, 1961; Monbeck, 1973; Siller, Ferguson, Vann, & Holland, 1967 (XII); Whiteman & Lukoff, 1962, 1963, 1965). That is, there was an overemphasis on loss, not just the loss of sight, but the belief in other nonsensory losses. Siller and his associates (1967, XII) postulated seven factors in the Disability Factor Scale-Blindness as characteristics of attitudes toward blindness. According to Monbeck (1973) four out of seven factors seemed to emphasize loss: "rejection of intimacy" (loss of qualities that attracted others), "generalized rejection" (loss of most positive personality traits), "inferred emotional consequences" (loss of independence and psychological normality), and "imputed functional limitations" (loss of ability to function in general). He further contended that a fifth factor, "authoritarian virtuousness" implied that blind people have gained desirable traits, while the two remaining factors, "interaction strain" and "distressed identification" were concerned with problems in the nondisabled persons when in contact with blind people.

Whiteman and Lukoff (1965) compared attitudes toward blindness and toward other handicaps among social work students. Three studies were made on separate samples of social work students and in each study, two comparable questionnaire forms, differing in objects to be assessed, were randomized among the social work students. Reactions to "blindness" were compared with reactions to "blind people," reactions to "blindness" were compared to "physical handicaps," and reactions to "blind people" were compared to reactions to "physically handicapped people". Blindness was seen as more uniquely destructive than any other physical handicaps even though evaluation of the traits of blind people and physically

handicapped people were similar. Comparable associations to blindness were more severe than those to blind people.

In the study, evidence was cited that social work students differentiated between blindness and general physical handicaps mainly in terms of conceptions of the potential severity of those physical conditions rather than in terms of their actual effects upon blind people. Similarly, Lukoff and Whiteman (1961, p. 42) and Whiteman and Lukoff (1962, p. 154) reported that "Social work students rate blindness as more severe than other physical handicaps, but do not rate blind people more severely maladjusted than other physically handicapped people." In addition, the following findings were reported. In a study of 2400 high school students, 24 percent agreed that "blind persons tend to be more unhappy than other physically handicapped person;" however, 55 percent agreed that "of all physical handicaps, blindness would make me most unhappy." Seventy-one percent agreed that "I imagine that suddenly becoming blind would be more frightening than becoming handicapped in any other way." According to Lukoff and Whiteman (1961), 82 percent of the blind people in the sample of their study endorsed the statement "sighted people are generally surprised if a blind person can do something," as compared with eight percent who disagreed.

Gowman (1957) conducted a sociological study of attitudes to blindness. His investigation consisted of three phases. In the first phase, he studied the attitudes of some 100 sighted high school seniors with a questionnaire developed specifically for the purposes of the research. The questionnaire consisted of three parts. In the first part, subjects ranked five different disabilities, including blindness,

arm amputation, leg amputation, severe facial burns, and deafness, in terms of the psychological impact of the disability (i.e., the one which would be most difficult to accept received a rank of one and the one which would be easiest to accept received a rank of five). This task was completed by subjects both for themselves and for their prospective mates. In the next segment of the questionnaire, subjects responded to 13 interpersonal situations involving a hypothetical visually disabled person of the same sex. Two possible alternative behavioral responses to these situations, as well as a "do not know" category, were offered, from which one response was to be chosen. Illustratively, one question asked of Ss, would or would not subject give up his seat on a crowded bus for a blind acquaintance who had no seat? The final section of the questionnaire was composed of 46 agree-disagree questions which involved stereotyped attitudes toward blindness. Here, opinions of the sighted regarding such things as the supposed abilities, personality characteristics, and inferred feelings of status in the visually handicapped were explored. The findings included the following: blindness was overwhelmingly selected as the worst possible disability for self with more than 80 percent of the subjects ranking it in the first position. Results for the prospective mates were in the same direction. Insofar as the situational and agree-disagree questions were concerned, differential findings appeared for lower and middle class subjects. The tendency was for lower class Ss to react to the visually handicapped with negative stereotyped attitudes, whereas middle class Ss related to the visually handicapped more in the same way as they would have related to the sighted.

In the second phase, he evaluated subjective responses of an unspecified number of war blind to society's attitudes by means of intensive interviews. Although the results of the interviews were not quantified, the subjects felt that adjustment was hampered by a flood of emotion, oversupport and permissiveness which they encountered in the family. A majority of Ss were sensitively aware of their status as a minority group and made efforts to integrate with the surrounding sighted society. Furthermore, responses of pity were universally singled out by the Ss as the emotional response most damaging to a feeling of self respect and self worth. In the third phase, he examined the behavior of a number of retail store clerks toward a visually handicapped person and his sighted female companion by using a controlled observation experiment. A blind male purchaser, his sighted female companion and an observer in the role of a browsing shopper, shopped for a man's white shirt in 13 men's furnishing stores while, for control purposes, seven stores were visited by a sighted male purchaser, his sighted female companion and an observer. Clerks' behaviors were categorized by both companion and observer in nine areas. Judgments were made about the kind of actions initially directed toward the companion or purchaser, as well as those which emerged throughout the entire purchasing situation. Responses such as "placed shirts before companion vs. purchaser" or "initial comment to companion vs. purchaser" were noted. The results indicated that while none of the clerks looked to the companion for cues in structuring his own behavior when the purchaser was sighted, five out of 13 clerks did so when the purchaser was blind. Furthermore, in the case of the sighted purchaser, all seven clerks placed the shirt in front of the purchaser, whereas in

the instance of the visually handicapped purchaser, only six out of 13 did so.

According to Monbeck (1973), blind people were frequently avoided, feared and rejected. He noted that sighted people often behaved as though blindness were a contagious disease that would jump from one person to another and that the desire to avoid contact with blind people often became a general rejection of them in areas of daily life and employment. Other studies (Murphy, 1960; Nikoloff, 1962) have supported this notion.

Murphy (1960) asked several groups of educators to rank categories of exceptional children according to those they would most prefer to teach and those they most understood. In the study, it was found that the great majority of the respondents not only placed the visually handicapped child on the rejection end of the continuum, but also signified that they knew very little about these children in comparison to those having other types of disability.

Kvaraceus (1956) reported the similar findings in his survey of attitudes and opinions of 84 youth workers, enrolled in a summer session course on the exceptional child, concerning eight categories of deviate children. The subjects placed blind and partially seeing children close to the rejection end and stated that they were least well-informed about these children. His research indicated a strong and wholesome tendency for the respondents to prefer to teach in those areas in which they believed themselves best informed.

In Nikoloff's study (1962), 197 elementary and secondary principals were asked if they would accept certain kinds of disabled individuals as student-teachers and full-time teachers in their schools. Of

the five categories of disability listed on the questionnaire, those which were in the category "blindness" were the most often rejected, although those which were in the "deafness" category were rejected nearly as often.

Himes (1950) explored various concepts of blindness prevalent in American culture and described two culturally and socially defined reactions to blindness. In one, the blind person was seen as normal in areas not affected by his blindness. Himes considered this to be an objective and desirable attitude, and claimed that it was not widespread in this society. Empirical evidence in support of this point of view was not provided. The other attitude was one of social stereotyping in which the handicap was thought to be diffused throughout the personality and behavior of the individual. The handicapped person was identified and classified with reference to his disability. Those who held this attitude toward the blind used as stereotypes either the blind beggars, the blind genius or sensory compensation in the blind. The net effect of these attitudes, according to Himes, was that blind people occupied an inferior social status, that they were eliminated from the routine competition of the society and that they were subjected to a downward flowing pattern of pity for which gratitude was expected.

Gellman (1959) stated that prejudice against handicapped groups existed, and he described four sources of origin of this prejudice: social customs and norms, child-rearing practices which stressed normalcy and health, recrudescence of neurotic childhood fears in frustrating or anxiety provoking situations and prejudice by invitation which was discrimination. Cohen (1972) stated quite directly his

conclusion that there was a serious prejudice of a rather unique nature against people who were blind which resulted in damaging discrimination.

Some research studies showed that attitudes toward blindness were related with selected personality variables. Whiteman and Lukoff (1961, 1963) found that attitudes toward blindness as a condition and toward blind people as individuals were associated with selected personality variables. Negative evaluations of blindness tended to be expressed by people who perceived the world as an unfriendly place, described themselves as distant from others, or identified themselves strongly with power. In research on attitudes toward blind persons, Cowen, Underberg, and Verillo (1958) demonstrated that anti-minority group attitudes (r=.36 N=101), anti-Negro attitudes (r=.45), and authoritarianism (r=.33) were highly correlated with negative attitudes toward the blind. Handel (1960) and Himes (1960) similarly indicated that attitudes toward the blind showed evidence of stereotyping and aversiveness to social closeness. More recently, English (1971) presented data which indicated that negative attitudes toward blind persons were part of a broader personality dimension which involved the stigmatization of nearly all persons who were physically deviant. Steingisser (1954) investigated the hypotheses that individuals who were well adjusted would have more positive attitudes toward the blind than a poorly adjusted group and would be less influenced by a lecture unfavorable to the blind. The measure of adjustment was the discrepancy between ideal and actual self ratings. The questionnaire for measuring attitudes toward blindness was developed by the author. In the study, both hypotheses were confirmed. Well adjusted college students tended to agree with positive statements and to disagree with negative

statements about the blind. The converse was true of poorly adjusted students. The poorly adjusted students also tended to resist changes from negative to positive attitudes toward the blind. Chevigny and Braverman (1950) stressed that castration anxieties were an important component of aversive reactions to the blind related to the period when sight was a pregenital partial instinct. Cowen, Underberg, and Verillo (1958) reasoned that if negative attitudes toward blindness were a function of castration anxieties, then men should have verbalized more negative attitudes toward blindness than women. They found this to be the case in their study ($p=.06$). However, their male subjects scored higher on the California Anti-Minority and Anti-Negro Scales which led the authors to state the interpretation in terms of castration was less parsimonious than in terms of differential generalized response characteristics of the sexes. Schauer (1951) also used an analytic orientation in seeking to explain the motivation of attitudes toward blindness. He stated that attitudes toward blindness were motivated by one's attitudes toward self and towards one's vision. Great emphasis was placed on social training at a time when looking was a source of pleasure to the child. This social training produced emotions of shame and disgust, which caused the child to avert his eyes and thereby laid the foundations for attitudes toward vision and those individuals without vision. Those attitudes were predominantly negative. Similarly, Braverman (1951) in her analysis of attitudes, picked up the theme of the minority status of the blind and explored further the psychological roots from which she felt these attitudes originated. The blind, in the eyes of the public, had a fairly stable set of characteristics which included low capabilities and intelligence, poor

emotional adjustment and were considered to have been either sinful or saintly in their morals. The psychological roots of these attitudes were developed around the concept of castration anxiety. Negative attitudes stemmed from a reaction to castration fears.

Inferior status position reflected in the Bible. An idea that blindness was a punishment for sin was reflected in the Bible. Particularly in the Old Testament, punishment and sin seemed closely interwoven. Divine intervention was associated with blindness when, in Genesis (19:9-11) the Sodomites who came to arrest Lot were blinded by two angels and Lot escaped. In Exodus (4:11) God made this point very clear when He said to Moses,"...who makes him (man) seeing or blind? Is it not I, the Lord?" In Leviticus (26:14-16) when Moses was given the injunction to obey the Commandments, he was warned that dimming sight was one of the prices of transgression. Moses repeated this warning when he gave his concluding charge to the people (Deuteronomy 28:65). Samson, blinded by the Philistines, ostensibly to reduce his threat to them, seemed to be receiving punishment for his sin (Judges 16:21). Blindness as a punishment was mentioned twice in Job (11:20; 17:4-5). Other moral injunctions backed by a threat of blindness were found in Psalms 69:23, Proverbs 30:17 and Zephaniah 1:17. However, this notion is denied by Jesus in the New Testament (John 9:1-5). "As he passed by, He saw a man blind from his birth. And His disciples asked Him, 'Rabbi, who sinned, this man or his parents, that he was born blind?' Jesus answered, 'It was not that this man sinned, or his parents, but that the works of God might be made manifest in him. We must work the works of Him who sent me, while it is day; night comes, when no one can work.' " On the other hand, to demonstrate God's power and Elymas' false ways, Paul (Acts 13:8-11) called

down a heavenly curse of blindness on the evil Elymas and said, "You son of the devil, you enemy of all righteousness, full of all deceit and villany, will you not stop making crooked the straight paths of the Lord? And now, behold, the hand of the Lord is upon you, and you shall be blind and unable to see the sun for a time."

In the Bible, blind people were often characterized as groping, stumbling, or unable to find their way, or almost helpless. In Genesis (27:1-9) when Isaac was old and his eyes were dim, he blessed Jacob rather than his elder brother, Esau. Part of a ruse involved Isaac's desire for a particularly spicy food which he asked Esau to prepare for him as a kind of inducement to his giving the blessing. According to Monbeck (1973), Isaac's predilection for a spicy food is explained in an extra-Biblical Jewish legend that said that because he could not see his food, he could not enjoy it with full relish and, therefore, his appetite had to be tempted with special dishes. Blind people are among those disqualified from the priesthood (Leviticus 21:16-23). In Deuteronomy (28:28-29) "May the Lord strike you with madness, blindness, and bewilderment; so that you will grope about in broad daylight just as a blind man gropes in darkness and you will fail to find your way."

In I Samuel (3:1-9), Eli, who counseled the young Samuel in how to respond to a direct call from God, was pictured as old and blind, when a great battle between the Hebrews and the Philistines occurred. After the battle, a messenger came to report the outcome to Eli. He was found sitting by a gate, "staring with sightless eyes," and when he was told that his two sons had been killed and the Ark of God captured, he fell from his seat and fatally broke his neck (I Samuel 4:15-18). This has been thought to imply that part of his inability to cope with

these tragedies, in addition to his old age, was that his blindness had weakened his will and resistance. It is written that, "We grope like those who have no eyes; we stumble at noon as in the twilight, among those in full vigor we are like dead men," (Isaiah 59:10).

In Matthew (15:13-14), "...Every plant which my heavenly father has not planted will be rooted up. Let them alone; they are blind guides. And if a blind man leads a blind man, both will fall into a pit." Similarly, there is a parable: "Can a blind man lead a blind man? Will they not both fall into a pit?" (Luke 6:36). Jesus was quoted, "But when you give a feast, invite the poor, the maimed, the lame, and the blind; and you will be blessed, because they can not repay you. You will be repaid at the resurrection of the just" (Luke 14:13-14).

Blind people were rejected on occasions in the Old Testament. Blindness disqualified men from serving as priests (Leviticus 21:16-23) and animals from serving as sacrifices (Leviticus 22:22). In II Samuel (5:8) it was written, "...The blind or lame shall not come into the house." However, no evidence of rejection was shown in the New Testament.

Pity and mercy toward blind persons existed in the Bible, particularly in the New Testament. Job, in his reflections on his past conduct, said, "I was eyes to the blind and feet to the lame," (Job 29: 15). The reputation of Jesus, in his own time, for mercy and pity, especially for blind people, was shown in the Gospels:

> And as Jesus passed on from there, two blind men followed Him crying aloud, "Have mercy on us, Son of David." When He entered the house, the blind men came to Him; and Jesus said to them, "Do you believe that I am able to do this?" They said to Him, "Yes, Lord." Then He touched their eyes, saying, "According to your faith be it done to you." And their eyes were opened. And Jesus sternly charged them, "See that no one knows it." (Matthew 9:27-30) And, behold, two blind men sitting by the road side, when they heard that Jesus was passing by, cried out, "Have mercy on us, Son of

> David!" The crowd rebuked them, telling them to be silent, but they cried out the more, "Lord have mercy on us, Son of David!" And Jesus in pity touched their eyes, and immediately they received their sight and followed Him. (Matthew 20:30-34) They came to Bethsaida. And some people brought Him a blind man and begged Him to touch him. And He took the blind man by the hand and led him out of the village; and when He had spit on his eyes and laid His hands upon him, He asked him, "Do you see anything?" And he looked up and said, "I see men; but they look like trees, walking." Then again He laid His hands upon his eyes; and he looked intently and was restored, and saw everything clearly. (Mark 8:22-25)

Inferior status position reflected by the Church. Lowenfeld (1973) divided the developmental stages of education of the visually handicapped into four phases: separation, ward status, self-emancipation, and integration. In the second phase of ward status, the church played an important role because under the auspices of the church, asylums and hospitals were founded, such as the one by St. Basil in Caesarea-in-Cappadocia (369 A.D.) to which the blind were also admitted (Lowenfeld, 1973, p. 2). He further stated that during the Middle Ages, a number of hospitals were founded exclusively for the blind, among them the Quinze-Vingts, which was opened in 1254 by St. Louis, reportedly for blind Crusaders. Similarly, Monbeck (1973) indicated that because of the Christian ideas of charity and pity, ideals which were so important in the appeal of the early church to the poor, oppressed, and enslaved multitudes of the Roman Empire, blind people came to be considered the special wards of the church. According to him, beginning as early as the fourth century, innumerable hospices and cloisters were established for the relief of blind people and other unfortunates, and with the spread of Protestantism, much of the charity formerly provided through the church was replaced by secular intervention. In the early Korean Church, pity and charity toward blind people were shown by American missionaries.

For example, the first educational and medical services for blind girls had been conducted from 1897 to 1935, by R. S. Hall who was an American Methodist missionary's wife (Seoul National School for the Blind, 1965). The same source indicates that similar services for blind boys were done by Moffer, an American Presbyterian missionary's wife; however, the years were not identified.

An idea that blindness was a punishment for a sin was held by the church (Lowenfeld, 1952, 1964). He stated that religious influences, naive concepts of justice, as well as superstitions, explained blindness as retribution for sins committed by parents or ancestors, or put the responsibility for his blindness on the person himself.

Although not with specific reference to attitude toward blindness; there were some studies which indicated religious people were more prejudiced than non-religious people (Allport & Ross, 1967; Jordan, 1968; Rokeach, 1969; Sorrentino & Hardy, 1972). Jordan (1968) showed the positive correlation between the importance of religion and negative attitudes toward the physically handicapped.

In a study of "personal religious orientation and prejudice," Allport and Ross (1967) established four generalizations concerning the relationship between subjective religion and ethnic prejudice: (a) on the average, churchgoers were more prejudiced than nonchurchgoers; (b) the relationship was curvilinear; (c) people with an extrinsic religious orientation were significantly more prejudiced than people with an intrinsic religious orientation; (d) people who were indiscriminately proreligious were the most prejudiced of all. In commenting on the research concerning religious persons, Rokeach (1969) wrote, "Most disturbing are those findings that show religious devoutness to be positively

rather than negatively related to bigotry, authoritarianism, dogmatism, and anti-humanitarianism" (Rokeach, 1969, p. 4).

2. Salutary Status Position

Salutary status position reflected by society. The inferior status was not the only psychological situation in which a person with a disability was placed (Wright, 1960, p. 54). Rather, he may have been looked up to and may have even enjoyed his exalted position. According to Wright (1960), these favorable attitudes toward disabled persons were not infrequent. In lecturing on blindness, Foley (1919) identified five types of attitudes toward blindness: (a) the blind were happier because they could laugh; (b) the blind were naturally religious; (c) colors could be identified by touch; (d) all blind persons were gifted in the arts, like music; and (e) blindness resulted in a loss of mental vigor and ability to work. Four out of five stereotypes she identified seemed to put blind people in salutary status positions. Similarly, Langworth (1930) in a review of the literature on blindness, isolated four stereotypes: (a) idealized and abnormally good; (b) repugnant and abnormally bad: (c) extremely clever; and (d) normal and well described, two of which belonged to salutary status positions. In the literature, Twersky (1955) found that in only a very few incidences blindness was accepted matter-of-factly without the intrusion of at least one of the several stereotypes that converged on blind persons. Monbeck (1973) classified attitudes toward blindness and blind people into fifteen categories: pity and sympathy, misery, darkness, helplessness, fools, uselessness, beggars, punishment for some past sins, compensation, avoidance and rejection, maladjustment, immorality and evil, usefulness, mystery, and idealization. Four of them (usefulness, mystery, compensation, and idealization) were

favorable attitudes. He identified and discussed three origins of these attitudes toward blindness and blind people: historical and cultural origin, product of actual encounters with blind people and symbolic origin of the eye, light and darkness.

The ancient Greeks afforded the blind a privileged religious position as was done in parts of Korea and Turkey (Villey-Desmeserets, 1930). Cultural differences have been observed by Hanks and Hanks (1948) in the positive attitudes toward disability which were more pronounced in equalitarian cultures than authoritarian cultures. Favorable attitudes may have existed where the society was characterized by cooperativeness and democratic attitudes rather than competitiveness and authoritarian orientation. According to Monbeck (1973) there was the widespread belief that blind people were especially suited to the occupation of soothsayer and seer because blindness and blind people had long been associated with mystery, magic, and the supernatural. He further indicated that blind people were believed to have had magical powers in South Vietnam, Korea, and among the Northern tribes of Africa and the North American Indians.

It has often been remarked that the loss of one sense was made up for by increased power in the remaining senses or that loss of sight was compensated by other gifts (Monbeck, 1973). Monbeck also stated that the idealization particularly involved the spiritual nature of blind people, their sensibilities, their personal orientation to the world and to other people.

There have been research studies which supported favorable attitudes toward blindness. Rusalem (1950) investigated attitudes of 130 graduate students in social psychology toward blind people using a

questionnaire containing physical, sociological, and psychological characteristics of the blind. In the study, he found that his Ss maintained more "favorable" than "unfavorable" attitudes toward the blind. He failed, however, to establish clearly which statements reflected favorable and which reflected unfavorable attitudes. He also gathered information with respect to the amount of contact his Ss had had with the blind and found that this variable did not significantly affect attitudes toward blindness. Other studies (Cowen, et al., 1958; Haring, Stern, & Cruickshank, 1958), supported this finding. They found that contact with blind persons was not a significant variable in determining adults' attitudes toward blindness. On the other hand, there were studies which suggested that such contact may have been a factor in positively influencing attitudes held toward blind persons (Bateman, 1962; Whiteman & Lukoff, 1962, 1963; Wolman, 1958). With regard to this matter, Bateman (1964) concluded that personal contact with blind persons, perhaps, increased the positiveness of sighted children's appraisal of the abilities of blind persons, but did not appear to affect sighted adults' attitudes toward blind people. According to Cowen and his colleagues (1961), one major contribution of Rusalem's study was the development of the concept of "environmental supports" as applied to the blind. This concept referred to selective perceptions which reinforced pre-existing attitudes toward blind persons; characteristics (for example, blind people carried canes, used guide dogs, wore dark glasses, had lack of facial expressions, attended separate schools, rarely worked in industry, were economically dependent, had very sensitive sense of touch, had keen hearing, had better than average memory)which people readily recognized or sought out in order

to maintain previously established attitudes toward blind persons. According to Whiteman and Lukoff (1962, 1963), unrealistic positive stereotyping was found most commonly among people who saw others as unfriendly, had a modest intelligence, or maintained "fundamentalists" religious beliefs. Individuals who scored high on positive stereotypes tended to believe that blind people had unusual musical gifts, or that "you can keep anything secret from a blind person in the same room," or that "blind people can get around without help because they are gifted with unusual abilities" (Whiteman & Lukoff, 1962, p. 155). Individuals who had higher levels of education tended to be better informed about blindness and more favorable toward integration of blind persons into the community. Lukoff and Whiteman (1961) indicated that there was a positive relationship between tendencies to feel pity for blind people on the one hand, and the tendency to espouse community "segragation" for the blind on the other. On the whole, a series of studies (Lukoff & Whiteman, 1961, 1963; Whiteman & Lukoff, 1964a, 1964b, 1965) which examined attitudes toward blindness and toward blind people failed to support the existence of a negative stereotype of the blind. Lukoff (1972) summarized these findings and stated, "Contrary to much of the literature, people's attitudes are not crystallized around a congery of negative images of blind people, although this may be true for some portion of people, and even in some selected environments" (Lukoff, 1972, p. 7).

Siller and Chipman (1964b) noted that high school students tended to be less favorable toward disabled people than other age-education groups, such as junior high or college students. The same result was obtained by Siller and his associates (1967, XII). That is, high

school students obtained the lowest mean score on ten of the sixteen scales of Disability Factor Scales. In the study, those with no college education were invariably more aversely inclined.

Although not with specific reference to blindness, research studies have demonstrated that females have more favorable attitudes toward disabled persons than do males (Jabin, 1965; Jordan, 1968; Siller & Chipman, 1964b; Siller, et al., 1967, XI; Siller, et al., 1967, XII; Yuker, et al., 1966).

Strong (1931) indicated that mildly favorable attitudes were verbalized toward cripples and toward the blind, while a more unfavorable attitude was expressed toward deaf-mutes. Some of those favorable attitudes were expressed as an admiration for the coping of the disabled individual, amazement at his accomplishments despite the handicap, respect for the inferred depth of understanding of life and self often not attained by others, and the attribution of superior powers to the disabled (Wright, 1960).

Neutral attitudes have also been shown in the literature review.

The establishment of the first school for the blind by Hauy was a confirmation of the belief that with proper education, blind people could be socially useful (Monbeck, 1973). However, he further indicated that the school for the blind in Paris and other schools for the blind established soon thereafter throughout Europe, in Britain, and in the United States were supported partly because they were an expression of Christian charity, but also because they took at least a few blind children out of public view and off the streets. In the Midwest, in the mid-nineteenth century, few people really believed that these schools had a practical use (Hendrickson, 1972).

One area of investigation by Cowen, Underberg, Verrillo, and Benham (1971) included parental attitudes as measured by scales of parental dominance, over-protection, rejection and acceptance which were taken from the parental Attitude Research Instrument as well as the F and Anti-Minority Scales to measure authoritarianism, anti-minority attitude. They also measured parental attitudes toward blindness with a scale developed by Cowen, Underberg, and Verrillo (1958). They could find no significant differences between attitudes of parents of visually handicapped adolescents who attended residential schools for the blind and a group of parents of visually handicapped adolescents who attended public day schools and a group of parents of sighted adolescents used as a control group. They suggested that this lack of differentiation may have been attributable to the particular adjustment measures employed.

Koehler (1936), cited in Parker, Wright, Meyerson, and Conick (1953), explored the attitudes of the University of Minnesota instructors toward blind students. Two-thirds or more of 43 instructors who answered her questionnaire reported the following attitudes: seldom or never conscious of their blind students in class, no hesitation in use of the words "blind" or "blindness," no hesitation in calling on blind students, not annoyed at being asked to make arrangements for notetaking, not annoyed at being asked for advance assignments, demanded the same quality of work from the blind as from the seeing students, the blind students did not appear to expect help. She stated that no instructor said he had been conscious of a feeling of resentment at having a blind student in class or felt annoyance at

having been asked to make arrangements for taking examinations. In the study, all but seven instructors thought that the academic work of the blind was of average or superior quality.

Salutary status position reflected in the Bible. In the Old Testament, evidence was found concerning salutary status positions. In Genesis (48:8-20), the whole question of old and blind Jacob's "mistaken" blessing of his grandchildren appeared to be an example of prophecy, for he claimed that he blessed Ephraim, who was younger, first, instead of Manasseh who was older because Ephraim would be the greater of the two. Abijah, a blind prophet, correctly predicted the death of Jeroboam's son at the end of his reign (I Kings 14:1-18). No salutary status positions were found reflected in the New Testament.

Salutary status position reflected by the church. No references were found concerning salutary status positions reflected by the church.

In summary, the review of the literature concerning attitudes toward blindness revealed blindness had a social stimulus value. This could have implied that people formed opinions and maintained attitudes about the blind based on the fact of blindness, in the absence of any other information about the individual. The person was identified and classified with reference to his disability. This characterization (either inferior status position or salutary status position) could have affected psychological adjustment of the blind person.

Measures of Attitudes and Values

1. Attitude Measurement Techniques

The attitude concept has been described by Allport (1954) as "the primary building stone in the edifice of social psychology," (Allport, 1954, p. 45). In spite of the centrality of this concept,

or perhaps because of it, there has been no consensual definition of attitude (Welsh, 1973). Allport (1935) defined attitude as "a mental and neutral state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related," (Allport, 1935, p. 810). Fuson and Campbell (1950) defined attitude in terms of the probability of the occurrence of a specified behavior in a specified situation. The term "attitude" was used by Siller and his associates (1967, p. 1) in its most general sense, encompassing expressions of congnitive, conative, and affective tendencies.

Scott (1968) made the point that the construct attitude has become so complex that one can no longer talk simply about "measuring an attitude." It has become necessary to restrict oneself to procedures for measuring a particular property of an attitude. Scott identified eleven dimensions or defining properties of attitudes as: (a) direction, (b) magnitude, (c) intensity, (d) ambivalence, (e) salience, (f) affective salience, (g) cognitive complexity, (h) overtness, (i) embeddedness, (j) flexibility, and (k) consciousness. According to Scott, "most efforts at measurement to date have been directed toward assessing the properties of direction and affective magnitude," (Scott, 1968, p. 265). Direction was defined by that author as favorable or unfavorable components of attitude representing, on the one hand, positive feelings, appraisals, and tendencies to approach or support the object and; on the other hand, negative feelings, appraisals, and tendencies to avoid or harm the object. The magnitude of an attitude referred to its degree of favorableness and unfavorableness. Cook and Sellitz (1964) examined broad classes of measurement techniques and made five groupings of

techniques: (a) measures in which the material for inferences consisted of self-reports, beliefs, feelings, or behaviors toward an object or class of objects; (b) measures in which inferences were drawn from observed behavior toward the object; (c) measures in which inferences were drawn from the individual's reaction to, or interpretation of, partially structured material relevant to the object; (d) measures in which inferences were drawn from performance on objective tasks where functioning may have been influenced by disposition toward the object; and (e) measures in which inferences were drawn from physiological reaction to the object.

Due to the nature of this present study, review of measurement techniques have been restricted to self-report techniques. A number of self-report questionnaires have been developed which differ in method of construction, method of response, and basis for interpreting scores. Sellitz, Johoda, Deutsch, and Cook (1959) have identified three types of scales as: differential scales, summated scales, and cumulative scales. In differential scales, the items form a gradation of such a nature that the individual agrees with only one or two, which corresponds to his position on the dimension being measured, and disagrees with statements on either side of those he has selected. Differential scales were originally proposed and developed by Thurstone (1928) as a method to approximate interval scales. Thurstone's scale constituted reasonably satisfactory ordinal scales; and provided a basis for saying that one individual was more or less favorable than another.

A summated scale consists of a series of items with which the subject is asked to express his agreement or disagreement. Each

response is given a numerical score indicating its favorableness, or unfavorableness, and the algebraic summation of the responses results in the total score. The total score is interpreted as representing an individual's position on a scale of favorable or unfavorable attitudes toward the object. The type of summated scale most frequently reported in the study of social attitudes follows a pattern devised by Likert (1932). In a Likert-type scale, the subjects are asked to respond to each item in terms of several degrees of agreement or disagreement; for example, (1) strongly agree, (2) agree, (3) undecided, (4) disagree, (5) strongly disagree. The Likert-type scale enables subjects to be ranked in terms of favorableness of attitude, but it does not provide a basis for saying how much more favorable one subject is than another, nor for measuring the amount of change after some experience.

Cumulative scales are made up of a series of items with which the subject indicates agreement or disagreement. However, in a cumulative scale, the items are related to one another in such a way that, ideally, an individual who replies favorably to item 2 also replies favorably to item 1; one who replies favorably to item 3 also replies favorably to items 1 and 2; and so on throughout the scale. An example of a cumulative scale was the Bogardus Social Distance Scale (Bogardus, 1925). This scale contained seven items which Bogardus believed denoted seven degrees of permitted closeness. Bogardus used this scale to assess attitudes toward various ethnic groups. The items were: (1) to close kinship by marriage, (2) to my club as personal chums, (3) to my street as neighbors, (4) to employment in my occupation

in my country, (5) to citizenship in my country, (6) as visitors only to my country, and (7) would exclude from my country.

In addition to the above three types of scales, Osgood, Suci, and Tannenbaum (1957) developed the semantic differential which is considered a self-report questionnaire. The semantic differential was originally used by Osgood and his associates in their attempts to measure "meaning," but the technique has since been applied and found useful in a wide range of research areas including the measurement of attitudes (Snider & Osgood, 1969). A semantic differential type rating scale consists of a set of bipolar scales which are anchored at each end by an adjective describing one side of a semantic continuum (e.g., valuable-worthless, fast-slow, dirty-clean, large-small, etc.). Usually a subject is asked to rate a concept on each scale by placing a check mark on the continuum which is divided into a seven point space. The original factor analysis of sets of adjectives done by Osgood and his associates (1957) revealed three major factors or dimensions in semantic space. These dimensions were evaluation, potency, and activity. Most attitude research using the semantic differential has been restricted to assessment of the evaluative dimension, although there have been occasional uses of the potency and activity dimensions, especially in the study of attitudes toward groups, institutions and social movements (Diab, 1967).

According to Payne (1974), the advantages of semantic differential include the easy assembly and scoring and the finer gradations of evaluation that are permitted. Ford and Meisels (1965) indicated that the responses made to scales representing the evaluative dimensions would seem to be easily influenced by a socially desirable response set.

Self-report questionnaires are based on the assumptions that the relationship between attitudes and expressions is a direct one and that the attitude corresponds to the manifest, common-sense implications of the stated belief or feeling (Welsh, 1973). However, self-report measures have a number of characteristics that make them susceptible to distortion of overt responses. According to Cook and Sellitz (1964), "Susceptibility of overt responses to distortion would be a function of three characteristics of the instrument: the extent to which its purpose is apparent, the extent to which the implications of specific responses are clear, and the extent to which responses are subject to conscious control," (Cook & Sellitz, 1964, p. 39). Jones and Sigal (1971) discussed two sources of extraneous variance: errors associated with "thoughtlessness" and errors of "psychologic." The first occurs when the individual faces the multiple item questionnaires with no incentive to be particularly discerning and no penality for casual sloppiness. In this situation, it is too easy for the subject not to care about the validity of his answers. The latter refers to a subject's tendency to rate other people according to how they "logically" should be rated, according to the subject's own personality theory instead of the subject's inner feelings. Self-report measures can also be influenced by "social desirability" distortions (Goldstein, 1960; Payne, 1974; Taylor, 1961) and by response sets or expressive styles unrelated to attitudes (Cook & Sellitz, 1964).

The study of attitudes in social psychology has been important only to the extent that it was related to behavior. One specific area of the study of Tittle and Hill (1967) evaluated relative predictive efficiency of four frequently used measurement techniques in terms of

degree to which these techniques resulted in the ability to predict overt behaviors. The measurement techniques evaluated were: (a) Thurstone successive-interval technique, (b) a semantic differential procedure, (c) a summated-rating Likert technique, and (d) Guttman-type scale. Results of this study indicated that the Likert scale proved to be the best predictor of behavior and the Thurstone scale was the poorest. Tittle and Hill also pointed out that the differential predictive power of various measurement techniques was partially attributable to other factors. The reliabilities of scales were related to predictive power, in that the Likert scale had the highest statistic reliability and the Thurstone had the lowest. The percentage of self-referent items in a scale was also related to the predictive ability of the scale. In the Likert scale, 87 percent of the items contained the personal pronoun "I" or "me," while the Guttman had 60 percent, and the Thurstone scale had only 20 percent. Also, the fact that the Likert scale permitted an intensity rating was considered to have an effect on the scales predictive ability.

2. Measures of Attitudes toward Blindness

In the measurement of attitudes toward blindness, there has been a reliance upon the summated Likert-type scale. Using items from earlier scales by Steingisser (1954) and Fitting (1954), Cowen, Underberg and Verrillo (1958) developed a 30-item Likert-type scale to measure attitudes toward blindness. For this scale, a single total score was obtained. In developing this scale, they used five workers with the blind (an administrator, a rehabilitation worker, a social worker, a psychologist, and a nursery school teacher) for judging items for direction (positive or negative). The judges were also given the

option of rating any of the statements as "undecided" if in their opinion, it did not clearly reflect either a positive or negative attitude toward blindness. On the basis of this judging procedure, 56 items were selected for which there was 100 percent judges' agreement with respect to direction. These 56 items were given in group administration to several adult education courses in psychology, with a total number of 101 subjects. For response, options were provided for each item as follows: strongly agree, mildly agree, mildly disagree, strongly disagree. These responses were weighted one, two, three, and four respectively in the case of positive items, and exactly the opposite for negative items. In short, the higher the score obtained, the more negative the attitude toward blindness. On the basis of these data, an item analysis was carried out for all 56 items. The final scale consists of the 30 items with the highest tetrachoric correlations ranging from plus .44 to plus .75. Of the 30 items, 20 indicate negative attitudes toward blindness, while the remaining 10 are considered to reflect positive attitudes. This scale has been used recently by English (1971). One criticism about this scale is that by employing a single summative score, the scale treats the domain of attitudes as one dimensional rather than a multi-dimensional conceptualization of attitudes (Siller, et al., 1967, XII). Another criticism may be that items are fairly easy and congnitively oriented as the authors suggested (Cowen, et al., 1961).

Although, not with specific reference to blindness, a Likert-type scale very similar to the Attitude to Blindness Scale was developed by Yuker, Block, and Young (1966). According to Siller and his associates (1967), the Attitude toward Disabled Persons Scale

(ATDP) was developed around 1959, with fuller information reported in a 1966 publication. The original ATDP is a 20-item scale for which a total summated score is obtained. Two new forms of ATDP, expanding the number of items in each to 30 items, were developed by Yuker, et al. (1966). Each statement suggests that disabled persons are either the same as or different from physically normal people. Approximately half of the items refer to similarities or differences in personality characteristics, whereas the other half deal with the question of special treatment for the disabled. This scale has six choices ranging from "I agree very much" to "I disagree very much." High scores on the scale presumably reflect a favorable acceptance of the disabled persons. Psychometric data for the ATDP was obtained from administration of the scale to students at Hofstra College in New York and to disabled people employed by Abilities Incorporated, a workshop for disabled persons in Albertson, New York. Split half reliabilities range from .78 (n=72) to .84 (n=110). This has reasonably good content validity, and significant correlations were found between ATDP and semantic differential scores (r=.26; n=110), scores on a job satisfaction scale for disabled workers (r=.46; n=86), and the Edwards Personal Preference Schedule (r=.25; n=72). One criticism about ATDP is that its reliability is not substantial and the value of the two scales as alternate forms is limited by their median intercorrelation of .67 (Siller, et al., 1967, Chap. XII). The general term "disability" when employed in an instrument, raises too many referents for the respondent. Different subjects may conceive of different disability conditions when responding to the instrument (Siller, 1966). Like the Attitude to Blindness Scale, the ATDP employs only a single summative score, and

treats this domain of attitudes as one-dimensional (Siller, et al., 1967, XII). Shaw and Wright (1967) suggested that it was suitable for research, but that some questions still exist about its validity.

Whiteman and Lukoff (1963, 1964a, 1964b, 1965) applied a component approach to the measurement of attitudes toward blindness. The basic methodology was to administer several questionnaires dealing with blindness to 58 evening college students and to 65 social work students. In the development of each questionnaire, a number of dimensions were postulated, and the items were specifically constructed to tap these dimensions. Item format was diversified in an attempt to minimize response set and to lend support to clusters or factors cutting across indices referring to common content, but differing in mode of presentation. The questionnaire taken by the social work students had to be abridged due to limitations in time available for administration. The data of each sample were treated separately. Intercorrelations among indices were factor-analyzed and rotated orthogonally. The factor analysis of the responses identified five factors or dimensions of attitudes toward blindness. The factors were: (a) personal attributes, which are concerned with the degree to which the respondents have a negative view of emotional life and general competencies of blind people; (b) social attributes, the degree to which the respondents see blind people as socially competent; (c) evaluation of blindness, the degree to which blindness is perceived as potentially threatening or uniquely frustrating; (d) non-protectiveness, tendencies to be protective of blind people; and (e) interpersonal acceptance, readiness for personal

interaction with blind people. Four of these factors were found in the group receiving the abridged questionnaire.

Whiteman and Lukoff have provided valuable initial structuring of attitude dimensions. However, the variety and complexity of the tasks to which the subject must respond, and the level of vocabulary employed, severely limit the practical utility of their indices (Siller, et al., 1967, XII; Welsh, 1973). Another criticism is that due to the restricted number of subjects and the highly specialized nature of these persons, generalization of results cannot readily be made (Siller, et al., 1967, XII).

Siller, Ferguson, Vann, and Holland (1967) developed a set of Likert-type scales to assess the salient dimensions of attitudes toward physically disabled persons (amputation, blindness, and cosmetic conditions). They avoided using the general term "disability" by selecting the three types of disability representing key positions on two pertinent continua: functional and cosmetic impairment. Amputation represented middle range on both cosmetic and functional impairment; blindness, high functional and low cosmetic impairment; and cosmetic conditions, low functional and high cosmetic impairment. The Likert-type items used in the scales were objectively scored and expressed in language comprehensible at an eighth-grade level of education. After two preliminary administrations of the questionnaire and subsequent reduction in number of items in each, Disability Factor Scales (DFS) were established. In the final developmental samples, each of three new groups of diverse demographic characteristics (amputation, n=483; blindness, n=477; cosmetic conditions, n=520) were given one of three revised and reduced questionnaires. Among these samples, there were

233 subjects who responded to all three disability questionnaires. The Disability Factor Scale-Amputation (DFS-A) contains 101 items: the Disability Factor Scale-Blindness (DFS-B) is made up of 105 items; and the Disability Factor Scale-Cosmetic (DFS-C) includes 80 items. Responses from the final administration were factor-analyzed and scales were derived from the resulting factors. They assigned names to these factors by which they tried to reflect the content of the factors. Seven factors for DFS-A and DFS-B respectively and six factors for DFS-C were identified. Due to the nature of the present study, review of factors has been restricted to DFS-B. The DFS-B resulted in seven factors: (a) Interaction Strain, (b) Rejection of Intimacy, (c) Generalized Rejection, (d) Authoritarian Virtuousness, (e) Inferred Emotional Consequences, (f) Distressed Identification, and (g) Imputed Functional Limitations. Interaction Strain involves distinctive uneasiness, discomfort, and embarrassment when interacting with blind people. In this factor, there is an emphasis on avoiding social contact and aversive feelings. Rejection of Intimacy consists of rejection of close, particularly familial, relationships with blind people. The sense of personal involvement and self-preference is strong in this factor. Generalized Rejection reflects a generalized negative orientation, and segration of blind people from others. Disturbance in empathic relationships is heavily emphasized and segregation is advocated. Authoritarian Virtuousness consists of ostensibly prodisabled thoughts and feelings projecting an image of the blind as having special gifts and desirable personal characteristics. Blindness is seen as improving a person's character and blind people are described as probably closer to the really important things of life. The self-reference elements characterize the

respondent as particularly warm, sympathetic, and ready to befriend the blind, and a general policy of tolerance is advocated. Inferred Emotional Consequences focuses almost exclusively on the psychological characteristics of the blind. Blind people are pictured quite unfavorably as maladjusted, self-pitying, hypersensitive, angry, and using their disability to exploit others. They are perceived as humiliating, dependent, but tend to do dangerous things rather than accept help. Distressed Identification involves highly personalized reactions to blindness serving as a stimulus which activates anxiety about the respondent's own vulnerability. In addition, blind people arouse curiosity, pity, and a sickish feeling in the stomach of the beholder. Imputed Functional Limitations focuses quite specifically on the ability of the blind person to function adequately and effectively in his environment. This factor contains many references to particular occupations. The blind are depicted as unable to do a good job as a lawyer, politician, doctor, mother, and president.

The internal consistency reliability coefficients of DFS-B ranged from .80 to .91. The coefficients of reliability of seven individual scales were: Interaction Strain, .88; Rejection of Intimacy, .84; Generalized Rejection, .91; Authoritarian Virtuousness, .87; Inferred Emotional Consequences, .83; Distressed Identification, .81; and Imputed Functional Limitations, .80. The test-retest reliability coefficients with two-week intervals and three-month intervals, ranged from .69 to .86, and from .81 to .88 respectively. The coefficients of individual scales with two-week intervals (n=107) were reported as: Interaction Strain, .83; Rejection of Intimacy, .84;

Generalized Rejection, .69; Authoritarian Virtuousness, .86; Inferred Emotional Consequences, .80; Distressed Identification, .85; and Imputed Functional Limitations, .84. Test-retest reliability coefficients with the interval of three months (n=37) were: Interaction Strain, .81; Rejection of Intimacy, .87; Generalized Rejection, .88; Authoritarian Virtuousness, .85; Inferred Emotional Consequences, .86; Distressed Identification, .83; Imputed Functional Limitations, .86. The magnitude of these coefficients are very compatible with the internal consistency reliability data.

The factor validity ranged from .66 to .93. The values represent the correlation between the sum of a set of item scores and the factors they share in common.

The factor validity coefficients of seven individual scales were: Interaction Strain, .71; Rejection of Intimacy, .70; Generalized Rejection, .84; Authoritarian Virtuousness, .93; Inferred Emotional Consequences, .66; Distressed Identification, .77; and Imputed Functional Limitations, .72. As for construct validity, "the direction and magnitude of the relationship of the DFS scores to demographic variables (sex, age, and education) is consistent with previous findings with other disability-attitude measures. Additional construct validation is to be found in the correlations between DFS and the ATDP which as expected, were virtually all moderate and positive." (Siller, et al., 1967, XII, p. 65). Furthermore, a large number of tests which theoretically should have no relationship to disability measures in fact proved unrelated with DFS-B (Siller, et al., 1967, XII, p. 36). The scales included the Kuder Preference Record, California Test of Mental Maturity, Henmon-Nelson Intelligence Test, Thurstone Interest Schedule,

A-S Reaction Study, Allport-Vernon-Lindzey Study of Values, and so forth. Concurrent validity information was also obtained from the group of physical therapy students (Siller, et al., 1967, XII, p. 36-38).

They having elected to work with the disabled, it was postulated that they would have more favorable attitudes than the general population, and thus would obtain higher scale scores. This was indeed the case. The physical therapy students had significantly higher means than did the remainder of the developmental samples.

Siller (1970) has reported the development of a general Disability Factor Scale (DFS-G) built from the three previous scales (DFS-A, DFS-B, and DFS-C). When this scale was administered to a group of 772 subjects, the results revealed seven factors which were identical to those found in the DFS-A and -B.

Other studies have reported the use of cumulative rating scales. Handel (1960) and Himes (1960) utilized social distance scales to demonstrate that attitudes toward the blind showed evidence of stereotyping and aversiveness to social closeness.

Whiteman and Lukoff (1965) applied the semantic differential rating technique to assess differences between attitudes toward blindness and attitudes toward blind people as separate concepts.

3. Measures of Values

According to Shaw and Wright (1967), Conservatism-Radicalism Opinionnaire was constructed by Lentz (1930). This scale includes two forms (J and K), each with 60 controversial items toward which a person might take a conservative or liberal view. These statements were drawn from various fields of interest: ethics, education, feminism, freedom

of speech, international affairs, sex and marriage, politics, race relations, religion, sport, transportation, mechanics, etc. In this opinionnaire the subjects place a plus sign beside the item if they agree with it more than they disagree; they place a minus sign beside it if they disagree with the item more than they agree with it. Omissions are permissible but undesirable. They receive 1 point for each conservative statement with which they agree and 1 for each radical statement with which they disagree, plus one half of the number of items omitted. High scores indicate conservatism.

Comrey and Newmeyer (1965) derived a scale called Radicalism-Conservatism from factor analyses of twenty-five sociopolitical attitude variables. A total of 120 items tapping the 25 variables were rated on nine-point Likert scales from 1 (agree very strongly) through 9 (disagree very strongly). When these items were formed into indices of the 25 variables and factor analyzed, 9 factors emerged. When factor scores for these nine factors were themselves factor analyzed, the primary "second-order" factor was comprised of five of the nine first-order factors (welfare-state, punitiveness, nationalism, religion, and racial tolerance). Out of the original 120 items, 67 loaded on this major second-order factor called radicalism-conservatism. From these 67 items, two parallel forms (A and B) of 30 items each were constructed. Scores thus can vary between 30 (radical) to 270 (conservative) on both forms. The equivalent-forms reliability between these two forms of the scale was reported to be .96 by Comrey and Newmeyer (1965).

Roscoe (1965) developed Polyphasic Value Inventory (PVI) to measure certain values among selected groups of college students. PVI consists of multiple-choice questions with responses organized on a

conservative-liberal continuum. The original form contained 30 questions; however, the revised form consists of 20 questions. The questions cover selected political, economic, educational, personal, social, moral, and religious areas of value differences. The questions and responses in the instrument are intended to require individuals to make value judgments rather than judgments of facts. There is no attempt to measure unconscious values.

PVI requires about 30 minutes in its administration. Each of the questions is treated as a separate source of information and no total score is awarded.

This is not a standardized scale. Therefore, no statistical method was used in its construction. It is not designed to evaluate values from a given value reference, but to inquire into existence of values. It yields data descriptive of a wide range of values which is applicable to a wide variety of situations over an extended period of time.

This inventory has been utilized in several research studies (Girling, 1968; Roscoe, 1965; Roscoe & Girling, 1970; Roscoe, Ritter, Teglovie, & Thayer, 1968; Tikalsky, 1966). Girling (1968) and Roscoe and Girling (1970) surveyed values held by American theological students. Roscoe (1965) and Roscoe, et al. (1968) investigated values of American college students by using this inventory. Tikalsky (1966) examined relationship between values and psychological theory preference among psychologists. Rokeach (1969) investigated whether those who were religious had a pattern of values that was distinctively different from those who were less religious and nonreligious.

Religiousness was determined in several ways: nominal religious identification, frequency of church attendance and self-ratings on perceived importance of religion in one's daily life. In the study, Rokeach Value Survey was used to assess values. This instrument requires that the respondents rank 18 terminal values and 18 instrumental values for importance. Religiously oriented Christians consistently ranked the terminal values salvation higher and pleasure lower than those less religious and nonreligious. Moreover, religious people typically ranked the moral values, forgiveness and obedience, higher and intellectual and logical values lower than the less religious and nonreligious. Two values, salvation and forgiveness, were found to be the most distinctively Christian values. He further examined the relationship of these two Christian values to social compassion. He found that these two Christian values were negatively related to social compassion.

Berg (1971) studied persistence and change in value-orientations among Protestant seminarians. In the research, he utilized self-identification method in determining a value position of fundamentalism.

Feagin (1964) utilized Intrinsic/Extrinsic Scale, Fundamentalism Scale (Fd Scale) and Anti-Negro Scale (extended version of E scale) in order to investigate racial prejudice and religious types by focussing on southern fundamentalists. Among these scales, Fundamentalism Scale (Fd) may be considered a measure of religious value because this measures the degree of orthodoxy. It consists of five items. Each item is a Likert type, with possible scores ranging from a high of 5 (high fundamentalism) to a low of 1 (low fundamentalism). Internal consistency reliabilities range from .61 to .73.

Summary of the Literature Review and Rationale for the Present Study

A variety of attitudes toward blindness have been examined through a review of culture, literature, legislation, personal opinions, and research studies. It has been clearly noted that these attitudes placed blind people in either inferior status positions or salutary status positions. Similar attitudes have been reflected in the Bible and by the Christian church. Both Old and New Testaments reflect inferior status positions toward blind people. However, the kinds of attitudes are obviously different. Common ideas in the Old Testament are a punishment for a sin, helplessness, rejection, while pity and charity toward blind persons are distinguishable characteristics reflected in the New Testament. Therefore, an improvement over the kind of attitude is made in the New Testament. The idea that blindness was a punishment for a sin was denied by Jesus and pity and charity were emphasized by the church. Neither the Bible nor the church seems to reflect salutary status positions with a few exceptions in the Old Testament.

In short, attitudes toward blindness reflected by society, the Bible and the church indicated that people may have formed opinions and maintained attitudes about the blind based on the fact of blindness, in the absence of any other information about the individual. It is further contended that the blind person reacts to these attitudes in ways that affect his psychological adjustment.

In the measurement of attitudes toward blindness, there has been a reliance upon the summated rating scales. Relatively few attempts have been made to assess attitudes toward blindness which have not used the Likert-type scales. These scales have been characterized by

the same problems which have been found in other attitude research. Some of the problems have been avoided in Disability Factor Scale-Blindness (DFS-B) as noted in the review of the literature. It has been revealed that very few attempts have been made to measure values and that no suitable instrument has existed to measure conservative-liberal religious values.

On the basis of the literature review, this study will investigate differences in attitudes toward blindness among students in theology and students in education.

C. Statement of the Problem

The primary purpose of this study is to compare attitudes of graduate students in education toward blindness with those of graduate students in theology. A second purpose is to investigate differences in attitude toward blindness among conservative and liberal students. A third purpose is to determine whether or not these attitudes are different for individuals at different levels of training as theologians. A fourth purpose of the study is to determine whether or not there are sex differences in attitudes toward blindness among education and seminary students.

D. Hypotheses

The preceding literature review suggests the following hypotheses.

1. Theological students, when compared to education students, will be more likely to express unfavorable attitudes toward blindness, as measured by Disability Factor Scale-Blindness.

Rationale: Negative attitudes toward blind people are reflected in the Bible. As a matter of fact, one origin of modern negative

attitudes toward blindness is found in the Bible. Theological students are more likely to learn these attitudes by exposure to the Bible than education students. In addition, the literature review reveals that religious people are more prejudiced against ethnic minorities and disabled persons than less religious or nonreligious people. Furthermore, it may be assumed that education students are more exposed to individual differences.

2. Conservative students defined by selected items from the Polyphasic Value Inventory (PVI) will be more likely to express unfavorable attitudes toward blind people than liberal students regardless of kinds of education.

Rationale: Conservative people tend to hold a value position based on loyalty to tradition and stressing the importance of established authority, class structure, standards of conduct, and religion. On the contrary, liberal people believe in progress and changes as opposed to conservative persons. Therefore, it is logical to hypothesize that conservative students will be more likely to hold negative attitudes which are reflected in the Bible and our historical tradition, and which prevail in our modern society than liberal students.

3. Female students will express more favorable attitudes toward blindness than male students, as measured by DFS-B.

Rationale: This hypothesis is supported by many previous research studies in the fields of attitudes toward disabled people as well as by psychoanalytic castration anxiety theory, as noted in the literature review.

4. Students in their third year of seminary training, in contrast to first-year students will be more likely to express unfavorable attitudes toward blind people, as measured by DFS-B.

Rationale: This hypothesis is formed because in the third year seminary students are assumed to be more exposed to the Bible and the Christian tradition, and to be more religious through more seminary training than the first-year seminary students.

In addition to the hypotheses, the following questions will be investigated. The review of the literature is not clear enough to formulate these hypotheses.

1. Are there differences in attitudes toward blindness in the seven dimensions of DFS-B among theological and education students?

2. Is there any relationship between age and attitudes toward blind people?

3. Are there differences in attitudes toward blindness among selected theological seminaries?

II. PROCEDURES

A. Subjects

The participants in this study were 213 graduate students enrolled in the School of Education at the University of Pittsburgh and 175 graduate level theological students enrolled in six theological seminaries in the Fall Term of 1975-1976 academic year. Ages of the subjects in both groups ranged from 21 to 56 years with the mean of 27 and the standard deviation of 6.

Education students included 151 females, 55 males and 7 sex unspecified. The theological students included 35 females, 138 males, and 2 sex unspecified. Most of the female theological students (27 out of 35) were enrolled at one of the six seminaries. Seminarians who participated in the present study were 43 first-year students, 51 second-year students, 51 third-year students, 19 fourth-year students (Catholic Seminarians), and 11 unspecified students as to year of study.

All of the education students who participated came from the five sections of Educational Research 210 (Introduction to Educational Research) and Educational Research 280 (Educational Measurement I). Educational Research 210 is required for all Master's degree education students with the exception of students majoring in educational research methodology. Educational Research 280 is for students majoring in educational research methodology. Therefore, students who were taking these courses were assumed to be representatives of the total population of Master's degree education students at the University of

Pittsburgh. All subjects were contacted and urged to participate in the study by the six instructors who taught these courses. Some of the professors administered the questionnaire during class and the others distributed it to the students and collected the responses the following week.

Four Protestant seminaries and two Catholic seminaries were contacted individually and permission was obtained to administer the questionnaire to their students. These seminaries are identified by letters A, B, C, D, E, and F. The number of subjects from the seminaries ranged from 11 to 51. As in the case of the education students, some professors administered the questionnaire in class, while others distributed it to students in chapel, and later collected the responses.

A total of 388 subjects responded. Among them, 55 subjects did not answer the five selected items from the Polyphasic Value Inventory to measure certain conservative vs. liberal values. The responses of these 55 subjects were treated separately in the statistical analysis which follows. Another 44 subjects omitted at least one of the items on the Disability Factor Scale-Blindness. Therefore, 289 subjects completed both scales.

Because of the restricted nature of the population under study, the conclusions drawn from this study are directly applicable only to education students at the University of Pittsburgh and the six theological seminaries selected for this study. These conclusions are generalizable to education and theological students from other schools of

education and theological seminaries to the extent that they can be assumed to resemble the individuals in the present study.

B. Instrument

The Disability Factor Scale-Blindness was used to measure attitudes of the subjects toward blindness. Selected items from the Polyphasic Value Inventory was also utilized to determine conservative-liberal values of the subjects.

Disability Factors Scale-Blindness (DFS-B)

This 105-item Likert-type questionnaire was developed and its psychometric characteristics were described by Siller and his associates (1967, XII). The items on the questionnaire reflected seven dimensions of attitude. The dimensions were: (a) interaction strain (15 items), (b) rejection of intimacy (12 items), (c) generalized rejection (23 items), (d) authoritarian virtuousness (17 items), (e) inferred emotional consequences (15 items), (f) distressed identification (10 items), and (g) imputed functional limitations (13 items).

Selected Items from Polyphasic Value Inventory (PVI)

The Polyphasic Value Inventory was developed by Roscoe (1965) to measure certain values among selected groups of college students. The original instrument had 30 questions; however, the revised form is composed of 20 multiple choice questions with five alternative responses for each question. Responses are organized on a conservative-liberal continuum. The questions cover political, economic, educational, personal, social, moral, and religious areas of values. In the instrument, values are not evaluated from a given value reference but are treated as data to investigate existence of values. No statistical treatment has

been made to scale the instrument or yield scores on a hypothesized continuum.

For the present study five items (numbers 11, 14, 18, 19, and 20) from the PVI were used. These five items were used to determine conservative vs. liberal values among the subjects.

C. Methods

The 105-item DFS-B (see Appendix A) and the five selected questions from PVI (see Appendix B) were printed in a seven-page booklet including separate instructions for the two scales and administered to the subjects in group settings.

The Likert-type items of the DFS-B were followed by six possible responses from which the subject chose the response which best expressed his or her opinion. The six choices were: (1) strongly agree, (2) agree, (3) not sure, but tend to agree, (4) not sure but tend to disagree, (5) disagree, and (6) strongly disagree. The DFS-B generally took up to 20 minutes for administration; however, there was no time limit. This measure yields seven factor scores. A low score indicates a more definite presence of the attitude dimension which is described by that factor. Siller (personal letter, 1975) said, "It is possible to combine these seven scores into a total single score in an arithmetic fashion." In the present study both the total single score and seven factor scores were obtained.

In this research, the coefficients of internal consistency reliability for each of seven factors and the total scale were obtained as administered to 289 subjects who responded to all 105 items of DFS-B and the five questions from the PVI. For the total scale coefficient alpha was .95. The coefficient alpha of seven subscales ranged from .75

to .87. The individual coefficients were: Interaction Strain, .87; Rejection of Intimacy, .79; Generalized Rejection, .87; Authoritarian Virtuousness, .83; Inferred Emotional Consequences, .84; Distressed Identification, .75; and Imputed Functional Limitations, .82. These coefficients were on the whole slightly lower than those reported by Siller and his associates (1967), except for the Inferred Emotional Consequences and the Imputed Functional Limitations scores which, in the present study, were slightly higher. In general, it appears that these internal consistency coefficients agree with those of Siller, et al.

Each of the five questions from the PVI required the subject to choose one of five possible answers and mark the number on the same IBM answer sheet. Responses on a conservative-liberal continuum were rearranged to avoid possible response bias. Unlike the original inventory, each item was treated as a Likert type, with scores ranging from a low of one (conservatism) to a high of five (liberalism). After collecting the data, responses were arranged on the original conservative-liberal continuum and scored.

In the present study, the coefficient alpha for this measure was .63. One item (see item number one of Appendix B) had very low correlation with the total score. The coefficient alpha for the other four items went up to .73 if this item was removed, but this item was included in the data analysis.

III. RESULTS

In keeping with the four hypotheses and three questions of the study, this chapter will be divided into six main sections. Section "A" deals with differences on the seven factor scores and total scale data of the Disability Factor Scale-Blindness between education and seminary student groups (hypothesis 1 and question 1). Differences on the DFS-B between conservative and liberal groups (hypothesis 2) are presented in section "B". Sex differences on the DFS-B are reported in section "C" (hypothesis 3), while section "D" presents differences on the DFS-B between the first- and third-year theological student groups (hypothesis 4). Pearson Product Moment correlations between age and the seven factor scores and total scale score of the DFS-B (question 2) are described in section "E". Differences among the six selected seminaries on the DFS-B (question 3) are reported in section "F".

A. Comparison of Attitudes toward Blindness between Education and Seminary Student Groups

Hypothesis 1 was that theological students, when compared to education students, would be more likely to express unfavorable attitudes toward blindness as measured by the DFS-B. Question 1 asked whether there are differences on each of the seven factor scores of the DFS-B among theological and education students.

Means and standard deviations on the seven factor scores and total scale data for education and theology students are reported in Table 1.

Table 1

Means and Standard Deviation of Education and Theology Students on the DFS-B

	Type of Students					
	Education			Theology		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Scale[a]						
I.S.	166	71.422	9.455	144	70.424	8.604
R.I.	164	52.841	8.948	140	55.743	7.281
G.R.	153	121.608	11.732	144	121.778	8.617
A.V.	158	65.405	10.880	142	63.838	9.987
I.E.C.	162	66.821	8.401	141	66.078	7.258
D.I.	167	42.180	7.803	145	41.041	6.413
T.F.L.	159	58.082	9.222	143	57.077	8.411
Total Score	122	479.836	52.119	125	474.128	42.049

[a]Meanings of abbreviations: I.S. (Interaction Strain); R.I. (Rejection of Intimacy); G. R. (Generalized Rejection); A. V. (Authoritarian Virtuousness); I.E.C. (Inferred Emotional Consequences); D.I. (Distressed Identification); I.F.L. (Imputed Functional Limitations).

The analysis of variance results (see Tables 3 and 4) indicated no significant differences on the total scale data between education and seminary student groups. Therefore, hypothesis 1 was not supported.

The data was further analyzed to answer Question 1, whether there are differences on the seven factor scores between these two groups. Significant differences on the Rejection of Intimacy factor were found in both weighted and unweighted tests.[1]

B. Comparison of Attitudes toward Blindness between Conservative and Liberal Groups

Hypothesis 2 was that conservative students defined by selected items from the PVI would be more likely to express unfavorable attitudes toward blindness than liberal students. Conservative and liberal

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[1] A frequently encountered problem in educational research is the nonorthoganality of effects, often the result of nonmanipulative variables or nonexperimental designs. When the main effects are correlated (cell frequencies are not proportional to marginal frequencies) the analysis and interpretation may become somewhat complicated. A weighted test might be made of each effect. The weighted test is considered liberal since it computes the sum of squares for the effect without adjusting for any other effects in the design. This approach is often used where there is reason to believe that the disproportionate cell frequencies reflect true proportions in the population. The unweighted test is used when there is some reason to believe that the cell frequencies could have been proportional except for some loss of subjects not the direct result of the research. It is a conservative test--it computes the sum of squares for an effect often adjusting for all other effects in the design. If the results of both tests agree, the interpretation is clear cut. In some instances, however, the weighted test will indicate retention of the null hypothesis. A higher alpha level (α=.10) is then sometimes used in connection with the unweighted test in an attempt to capture the "borderline" (those with probability levels near the α =.05 used for the weighted test) unweighted test outcomes. Both test results are reported here to allow the reader to satisfy himself as to the meaningfulness of the individual test results.

students were determined by selecting the median score of 14 after scoring responses of 333 students on the five selected items from the PVI. Those who obtained lower than the median score of 14 were considered conservative, and students who had 14 or higher were designated liberal. Range for possible scores was from 5 to 25. Subjects who omitted items on certain factors of the DFS-B were eliminated in the statistical treatment of these factors only. Therefore, the number of subjects varied from factor to factor in the analysis. Table 2 shows the means and standard deviations of these groups according to field of study (Education and Theology). The two-way analysis of variance results on the seven factor scores and total scale score for conservative and liberal groups, and education and seminary student groups are summarized in Tables 3 and 4.

Table 2

Means and Standard Deviations on DFS-B of Conservative vs. Liberal Students According to Field of Study

	Conservative			Liberal		
Scale	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Education						
I.S.	62	70.710	(9.155)	110	71.791	(9.586)
R.I.	61	52.852	(9.029)	109	52.743	(8.745)
G.R.	54	120.778	(12.298)	105	121.943	(11.209)
A.V.	61	62.934	(10.405)	102	66.882	(10.781)
I.E.C.	62	66.032	(7.727)	106	66.774	(8.951)
D.I.	65	41.415	(7.935)	108	42.815	(7.569)
I.F.L.	59	56.966	(8.917)	106	58.670	(9.144)
Total	45	473.289	(48.463)	82	482.463	(52.951)
Seminary						
I.S.	99	69.879	(9.334)	45	71.622	(6.665)
R.I.	97	55.371	(7.654)	43	56.581	(6.363)
G.R.	100	121.580	(9.001)	44	122.227	(7.752)
A.V.	97	62.412	(9.555)	45	66.911	(10.308)
I.E.C.	98	65.949	(6.717)	43	66.372	(8.440)
D.I.	100	40.450	(6.866)	45	42.356	(5.095)
I.F.L.	99	56.980	(8.445)	44	57.295	(8.426)
Total	86	470.221	(41.819)	39	482.744	(41.796)

Table 2 (continued)

Scale	Conservative N	Conservative $\bar{X}$	Conservative SD	Liberal N	Liberal $\bar{X}$	Liberal SD
Education and Seminary						
I.S.	161	70.199	(9.246)	155	71.742	(8.817)
R. of I.	158	54.399	(8.276)	152	53.829	(8.304)
G.R.	154	121.299	(10.245)	149	122.027	(10.284)
A.V.	158	62.614	(9.863)	147	66.891	(10.603)
I.E.C.	160	65.981	(7.102)	149	66.658	(8.780)
D.I.	165	40.830	(7.297)	153	42.680	(6.920)
I.F.L.	158	56.975	(8.596)	150	58.267	(8.934)
Total	131	471.275	(44.052)	121	482.554	(49.455)

Table 3

Differences between Conservative and Liberal Groups and between Education and Seminary Student Groups on DFS-B (Unweighted Tests)

Source	df	MS	F	(probability)
I.S.				
School	1	26.320	.320	
Value	1	46.355	.564	
Interaction	1	7.621	.093	
Error	312	82.122		
R.I.				
School	1	237.568	3.550	(.057)
Value	1	.468	.007	
Interaction	1	29.448	.440	
Error	306	66.914		
G.R.				
School	1	22.566	.213	
Value	1	48.406	.457	
Interaction	1	4.412	.042	
Error	299	105.977		
A.V.				
School	1	10.207	.097	
Value	1	594.950	5.654	(.017)
Interaction	1	5.166	.049	
Error	301	105.234		
I.E.C.				
School	1	.263	.004	
Value	1	21.498	.338	
Interaction	1	1.716	.027	
Error	305	63.683		
D.I.				
School	1	36.714	.722	
Value	1	79.468	1.563	(.210)
Interaction	1	4.505	.089	
Error	314	50.857		
I.F.L.				
School	1	.007	.000	
Value	1	110.018	1.427	(.231)
Interaction	1	32.539	.422	
Error	304	77.087		
Total				
School	1	278.062	.126	
Value	1	2445.618	1.112	(.293)
Interaction	1	156.377	.071	
Error	248	2199.540		

Table 4

Differences between Conservative and Liberal Groups and between Education and Seminary Student Groups on DFS-B (Weighted Tests)

Source	df	MS	F	(probability)
I.S.				
School	1	74.900	.912	
Value	1	188.063	2.290	(.127)
R.I.				
School	1	672.894	10.056	(.002)
Value	1	25.152	.376	
G.R.				
School	1	4.019	.038	
Value	1	40.151	.379	
A.V.				
School	1	186.315	1.770	(.181)
Value	1	1393.157	13.239	(.001)
I.E.C.				
School	1	13.651	.214	
Value	1	35.305	.554	
D.I.				
School	1	122.790	2.414	(.117)
Value	1	271.535	5.339	(.020)
I.F.L.				
School	1	74.128	.962	
Value	1	128.443	1.666	(.195)
Total				
School	1	1628.646	.740	
Value	1	8001.844	3.638	(.054)

The analysis of variance results yielded a significant difference between these groups on the total scale data at .054 level in the weighted test only. The unweighted test did not reach statistical significance. Therefore, it may be stated that there was a tendency for liberal students to express more favorable attitudes toward blindness, which tended to support hypothesis 2.

To compare reactions to each of seven attitudinal dimensions between the two groups, the data was further analyzed (see Tables 3 and 4). There was a significant difference on the Authoritarian Virtuousness factor between these groups at .05 level in both weighted and unweighted tests, and on the Distressed Identification factor, there was a significant difference in the weighted tests only. Liberal students expressed significantly more favorable reactions to these two dimensions. No statistical differences were found on the other five attitudinal dimensions. However, liberal students had somewhat higher means on all dimensions except the Rejection of Intimacy factor. The majority of seminarians were in the conservative group while the majority of education students belonged to the liberal group. The opposite trend on the Rejection of Intimacy seemed to reflect this difference.

C. Sex Differences on Attitudes toward Blindness

Another two-way analysis of variance was done to test hypothesis 3 that female students would express more favorable attitudes toward blindness than male students and to obtain additional information. Table 5 presents means and standard deviations on the seven factor scores and total scale data of DFS-B for male and female students. Table 6 reports means and standard deviations on the DFS-B

of education and seminary students by sex. The analysis of variance results for the total and seven factor scores for education and seminary male and female students are shown in Tables 7 and 8.

Table 5

Means and Standard Deviations of Male and Female Students on DFS-B

Scale	Sample Size	Mean ($\bar{X}$)	Standard Deviation (SD)
Females			
I.S.	153	72.209	9.620
R.I.	149	53.953	8.981
G.R.	144	123.569	11.040
A.V.	145	66.924	10.386
I.E.C.	147	67.184	8.725
D.I.	153	42.765	7.516
I.F.L.	148	59.378	8.972
Total Test	120	486.442	52.656
Males			
I.S.	158	69.753	8.325
R.I.	157	54.389	7.693
G.R.	154	120.013	9.331
A.V.	156	62.558	10.117
I.E.C.	158	65.899	6.969
D.I.	160	40.537	6.736
I.F.L.	156	56.032	8.450
Total Test	128	468.305	39.753

Table 6

Means and Standard Deviations on DFS-B of Education and Seminary Students According to Sex

	Education			Seminary		
Scale	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Females						
I.S.	123	72.138	(9.645)	29	72.517	(9.844)
R.I.	119	52.916	(9.117)	28	58.357	(7.020)
G.R.	114	123.096	(11.696)	29	125.069	(7.955)
A.V.	115	66.357	(10.377)	29	69.276	(10.440)
I.E.C.	118	67.381	(8.841)	27	65.889	(8.437)
D.I.	123	42.805	(7.857)	29	42.897	(5.906)
I.F.L.	117	58.855	(9.438)	29	61.034	(6.684)
Total	93	483.763	(54.512)	26	495.115	(46.212)
Males						
I.S.	43	69.372	(8.671)	115	69.896	(8.226)
R.I.	45	52.644	(8.582)	112	55.089	(7.228)
G.R.	39	117.256	(10.848)	115	120.948	(8.610)
A.V.	43	62.860	(11.878)	113	62.442	(9.418)
I.E.C.	44	65.318	(6.958)	114	66.123	(6.991)
D.I.	44	40.432	(7.460)	116	40.578	(6.474)
I.F.L.	42	55.929	(8.324)	114	56.070	(8.532)
Total	29	467.241	(41.947)	99	468.616	(39.304)
Females and Males						
I.S.	166	71.422	(9.455)	144]	70.424	(8.604)
R.I.	164	52.841	(8.948)	140	55.743	(7.281)
G.R.	153	121.608	(11.732)	144	121.778	(8.617)
A.V.	158	65.405	(10.880)	142	63.838	(9.987)
I.E.C.	162	66.821	(8.401)	141	66.078	(7.258)
D.I.	167	42.180	(7.803)	145	41.041	(6.413)
I.F.L.	159	58.082	(9.222)	143	57.077	(8.411)
Total	122	479.836	(52.119)	125	474.128	(42.049)

Table 7

Differences between Male and Female Student Groups and between Education and Seminary Student Groups on DFS-B (Unweighted Tests)

Source	df	MS	F	(probability)[a]
I.S.				
School	1	3.371	.041	
Sex	1	243.785	2.992	(.081)
Interaction	1	6.280	.003	
Error	306	81.486		
R.I.				
School	1	671.078	9.978	(.002)
Sex	1	2.407	.036	
Interaction	1	119.280	1.774	(.181)
Error	300	67.257		
G.R.				
School	1	89.947	.874	
Sex	1	991.098	9.631	(.002)
Interaction	1	38.081	.370	
Error	293	102.911		
A.V.				
School	1	197.380	1.873	(.169)
Sex	1	382.530	3.631	(.054)
Interaction	1	147.944	1.404	(.235)
Error	296	105.362		
I.E.C.				
School	1	48.943	.787	
Sex	1	136.424	2.193	(.136)
Interaction	1	68.518	1.101	(.295)
Error	299	62.208		
D.I.				
School	1	.197	.004	
Sex	1	182.498	3.575	(.056)
Interaction	1	.040	.001	
Error	308	51.043		
I.F.L.				
School	1	110.422	1.453	(.227)
Sex	1	264.621	3.482	(.060)
Interaction	1	54.941	.723	
Error	298	76.006		

Table 7 (continued)

Source	df	MS	F	(probability)[a]
Total				
School	1	2618.489	1.206	(.272)
Sex	1	6034.612	2.780	(.093)
Interaction	1	1061.260	.489	
Error	243	2170.503		

[a]Reported only for those tests with calculated values of F greater than one.

Table 8

Differences between Male and Female Student Groups and between Education and Seminary Student Groups on DFS-B (Weighted Tests)

Source	df	MS	F	(probability)
I.S.				
School	1	76.813	.943	
Sex	1	467.818	5.741	(.016)
R.I.				
School	1	635.787	9.453	(.003)
Sex	1	14.442	.215	
G.R.				
School	1	2.142	.021	
Sex	1	899.780	8.743	(.004)
A.V.				
School	1	183.646	1.743	(.185)
Sex	1	1440.960	13.676	(.001)
I.E.C.				
School	1	41.614	.669	
Sex	1	109.736	1.764	(.182)
D.I.				
School	1	100.557	1.970	(.158)
Sex	1	406.941	7.973	(.005)
I.F.L.				
School	1	76.018	1.000	
Sex	1	799.352	10.517	(.002)
Total				
School	1	2011.641	.927	
Sex	1	19845.267	9.143	(.003)

The data analysis indicated a significant sex difference on the total scale score at .05 level in the weighted test and .093 level in the unweighted test. Female students obtained a significantly higher average score on the total score than male students, which supported hypothesis 3 that female students would be more likely to express more favorable attitudes toward blindness than male students. Significant sex differences on five factors were found in both weighted and unweighted tests. These factors were Interaction Strain, Generalized Rejection, Authoritarian Virtuousness, Distressed Identification, and Imputed Functional Limitations. Female students reacted to these dimensions significantly more favorably than male students regardless of whether they were education or seminary students. No significant interactions between type of school and sex were found. There were no significant sex differences on Rejection of Intimacy and Inferred Emotional Consequences dimensions. Male students had a slightly higher mean on the Rejection of Intimacy factor.

Consistent sex differences on the total scale score and the above five factor scores were found among the subjects who did not answer the selected questions from PVI and who, therefore, were not included in the above analysis. Table 9 reports the means and standard deviations of this group. These differences were not tested for statistical significances.

Table 9

Means and Standard Deviations on DFS-B of Male and Female Students who Omitted Selected Items from PVI

	Female			Male		
Scale	N	$\bar{X}$	SD	N	$\bar{X}$	SD
I.S.	20	74.100	10.533	24	68.708	10.531
R.I.	24	55.167	7.400	26	55.962	7.743
G.R.	23	123.435	8.790	25	120.400	10.388
A.V.	19	67.368	12.442	22	66.318	10.101
I.E.C.	20	66.700	7.378	22	66.091	9.304
D.I.	20	43.800	7.654	26	42.308	6.857
I.F.L.	18	63.556	7.883	24	58.917	9.269
Total	17	502.647	43.521	18	484.389	51.887

D. Comparison of Attitudes toward Blindness between the First and Third Year Seminary Student Groups

Table 10 shows the means and standard deviations of first and third-year seminary students on the DFS-B. A t-test was done on the total and seven factor scores to test hypothesis 4 that students in their third-year seminary training in contrast to first-year students, will be more likely to express unfavorable attitudes toward blindness. Table 10 presents these t-test results.

Table 10

Differences between First and Third Year Student Groups on DFS-B

Scale/Group	N	$\bar{X}$	SD	T	df	Two-Tail probability
I.S.						
First Year	31	72.4194	8.111	.43	72	.669
Third Year	43	71.5814	8.421			
R.I.						
First Year	31	58.9355	7.075	2.28	71	.026
Third Year	42	55.9105	6.826			
G.R.						
First Year	32	123.500	9.436	.24	74	.811
Third Year	44	123.0455	7.091			
A.V.						
First Year	31	67.4516	10.560	1.18	72	.244
Third Year	43	64.7907	8.863			
I.E.C.						
First Year	31	67.6774	6.554	.86	70	.392
Third Year	41	66.1951	7.711			
D.I.						
First Year	32	43.9063	5.544	2.07	73	.042
Third Year	43	40.8140	6.967			
I.F.L.						
First Year	31	57.3871	7.919	-1.32	72	.192
Third Year	43	59.7674	7.492			
Total						
First Year	27	492.1481	44.200	1.28	61	.205
Third Year	36	478.8611	37.905			

No significant difference on the total scale score between these two groups was revealed at .05 level. However, examination of the two means indicated a tendency for the first-year seminarians to react to blindness more favorably than did the third-year students.

In addition, t-tests were done on the individual factor means. These indicated significant differences between these groups on the Rejection of Intimacy and Distressed Identification dimensions. The first-year seminarians reacted to these factors more favorably. First-year students tended to have higher average scores on Interaction Strain, Generalized Rejection, and Inferred Emotional Consequences, while the third-year seminarians had higher means on the Authoritarian Virtuousness and Imputed Functional Limitations dimensions. These differences were not statistically significant. Therefore, hypothesis 4 was supported only to the extent that "attitude toward blindness" is defined in terms of Rejection of Intimacy and Distressed Identification.

E. Relationships between Age and Attitudes toward Blindness

Pearson Product Moment correlations between age and the seven factor scores and total scale data of 312 subjects who reported their ages were computed to answer Question 2, whether there are relationships between age and attitudes toward blindness. Table 11 reports Pearson Product Moment correlations means and standard deviations for age and seven factor scores and total. No significant relationships between age and attitude toward blindness were indicated.

Table 11

Relationship between Age and DFS-B

Variable	N	Mean	SD	Correlation with Age (probability)		
				r	probability	N
I.S.	317	70.9590	9.0425	.0497	(.387)	306
R.I.	312	54.1186	8.2798	.0643	(.266)	302
G.R.	304	121.6974	10.2613	-.0742	(.205)	294
A.V.	306	64.6732	10.4143	-.0477	(.412)	297
I.E.C.	311	66.3505	7.9419	.0554	(.338)	301
D.I.	319	41.6959	7.1690	.1018	(.074)	308
I.F.L.	310	57.6581	8.7784	.0284	(.625)	300
Total	253	476.8221	46.9241	.0557	(.385)	245
Age	321	27.1059	6.3974			

F. Comparison of Attitudes toward Blindness Among the Six Selected Seminaries

To answer Question 3, whether there are differences on attitudes toward blindness among the selected seminaries, a one-way analysis of variance was done on the seven factor scores and total scale score of the DFS-B. Means of the six seminaries on the seven factor scores and total scale scores are summarized in Table 12 and the analysis of variance results are presented in Table 13.

Table 12

Means of Six Seminaries on DFS-B

	Means					
Scale/Seminaries N	A 11	B 17	C 33	D 49	E 15	F 51
I.S.	67.80	69.18	71.61	71.77	65.33	71.24
R.I.	53.70	56.00	55.73	55.62	53.00	57.86
G.R.	117.40	119.18	120.76	122.58	118.33	124.10
A.V.	62.44	61.94	61.03	62.82	61.64	69.52
I.E.C.	63.60	63.93	68.42	66.71	63.36	66.50
D.I.	43.09	41.06	41.48	40.77	38.00	42.32
I.F.L.	52.44	59.65	56.45	57.65	54.53	58.59
Total	451.25	475.79	470.54	477.13	451.38	490.77

Table 13

Differences among Six Seminaries on DFS-B

Scale/Source	df	MS	F	(probability)
I.S.				
Between Groups	5	122.275	1.589	(.165)
Within Groups	162	76.9412		
R.I.				
Between Groups	5	71.3852	1.340	(.249)
Within Groups	160	53.2692		
G.R.				
Between Groups	5	161.8500	2.110	(.066)
Within Groups	163	76.7099		
A.V.				
Between Groups	5	395.1328	4.405	(.001)[a]
Within Groups	158	89.6954		
I.E.C.				
Between Groups	5	85.2672	1.513	(.188)
Within Groups	157	56.3397		
D.I.				
Between Groups	5	52.7359	1.253	(.286)
Within Groups	166	42.0779		
I.F.L.				
Between Groups	5	106.0156	1.446	(.210)
Within Groups	161	73.3030		

Table 13 (continued)

Scale/Source	df	MS	F	(probability)
Total				
Between Groups	5	4595.9000	2.525	(.032)[b]
Within Groups	138	1820.3587		

[a]Scheffe Post Hoc Comparison procedures were applied to the pairwise comparisons. It was found that Seminary F was significantly different from the other five seminaries.

[b]Scheffe Post Hoc Comparison procedures were applied to the pairwise comparisons. It was found that seminary F was significantly different from the combination of seminary A and E.

The analysis of variance results done on the total scale score yielded significant differences among the six seminaries at .05 level. Scheffe's Post Hoc comparison procedures were applied to the pairwise comparisons and showed a significant difference between the mean of the seminary F and the combined mean of the seminaries A and E. Students in the seminary A and seminary E expressed significantly more unfavorable reactions to blindness than those in the seminary F. No other significant pairwise differences were obtained. But examination of Table 12 indicates that the seminary B, C, and D students expressed very similar attitudes toward blindness. The mean of these three seminary means was 474.5 which is considerably higher than the mean (451.32) of the seminary A and E means and lower than the seminary F mean (490.77).

In addition, significant differences at .05 level were found among the six seminaries on the Authoritarian Virtuousness dimension of attitudes toward blindness. Students of five seminaries (except the seminary F students) had similar average scores on this attitudinal dimension (around 62). The seminary F students scored high on this factor. The seminary F mean was 69.52; the mean of the other five seminary means was 61.77. Scheffe's Post Hoc Comparison results indicated significant difference between these two mean scores.

IV. DISCUSSION

This chapter will be divided into six sections to discuss each of the findings relating to the four hypotheses and three questions of the present study. Hypothesis 1 and question 1 are discussed in section A.

A. Differences in Reactions to Blindness between Education and Seminary Student Groups

One purpose of this study was to compare attitudes of graduate students in education toward blindness with those of graduate students in theology. Hypothesis 1 and question 1 relate to this aspect of the study. For hypothesis 1 it was stated that theological students when compared to education students, will be more likely to express unfavorable attitudes toward blindness, as measured by DFS-B. Question 1 was whether there are differences in reactions to each of seven factors of DFS-B among education and theological students.

Contrary to the first hypothesis, there was no significant difference between education and seminary student groups on the total scale score of DFS-B. However, inspection of the mean scores of the total scale data between these groups indicated that the difference found, although not significant, was in the predicted direction.

This lack of significant differences in reactions to blindness between the two groups may be due to an inappropriate definition of "theological students". This is supported by the large differences among the six seminaries selected. These differences among seminaries are discussed further in section F.

An alternative explanation of lack of differences may relate to the validity of the instrument for measuring unfavorable attitudes toward blindness as reflected in the Bible. For example, very few items of the DFS-B directly examine the idea that blindness is a punishment for a sin, which is one of the most distinguishable attitudes reflected in the Old Testament.

A significant difference was found between education and seminary student groups on the Rejection of Intimacy factor. Education students scored significantly lower than theological students on this factor. This finding coincides with those of Kvaraceus (1956), Murphy (1960) and Nikoloff (1962) who reported that educators placed blind and partially sighted to the rejection end when they were asked to rank categories of exceptional children according to those they would most prefer to teach. Siller and his associates (1967, XII) suggested that the Rejection of Intimacy factor involves highly personalized and self referenced reactions. It is one of rejection of intimate, particularly familial, relationships with blind people. There is an unwillingness to date, fall in love with or marry a blind person and there is a strong assertion that "I would rather not have any children than a child who is blind."

Inspection of the means on the factor scores (see Table 1) indicated that education students had higher means on five factors and about the same mean score on the Generalized Rejection factor. This trend is opposed to the finding on the Rejection of Intimacy dimension. One question may be raised as to how this somewhat contradictory finding can be accounted for. One explanation is found in the nature of some of the items in this dimension. It seems that some items in the dimension were picking up on other variables in addition to attitudes toward blindness. An item such as "Even if I fell in love with a blind person, I don't think I would actually be willing to marry that person" might not have allowed the subjects to differentiate between their feelings toward a blind person and their feelings toward marriage in general. Similarly, the item that "I would never adopt a child who is blind" may not differentiate between feelings toward a blind child and toward adoption in general. They may not have wanted to adopt any child regardless of whether or not it was blind. In short, theological students may have reflected their religious morals in responding to these kinds of items.

Another possible way of explaining the finding may be that the Rejection of Intimacy factor is highly sensitive to measuring certain influences of attitudes toward blind people taught by Jesus on reactions of seminary students to blind people. In the New Testament blind people are never rejected. Whenever Jesus met blind people, he had mercy on them. In addition, an idea that blindness is a punishment for sin was denied by Jesus.

The favorable reaction of seminary students to the Rejection of Intimacy dimension further suggests that the New Testament has more influence on their attitudes toward blindness than the Old Testament.

B. Differences in Reactions to Blindness between Conservative and Liberal Student Groups

Hypothesis 2 was that conservative students, defined by selected items from PVI, would be more likely to express unfavorable attitudes toward blindness than liberal students. The analysis of variance results indicated a significant difference between these groups on the total scale score of the DFS-B. Liberal students showed a tendency to react to blindness more favorably, which supports the second hypothesis. More favorable attitudes of liberal students toward blindness may be due to their beliefs of progress and change. They may be less likely to be loyal to negative attitudes toward blindness which are reflected in the Bible and our historical tradition and which prevail in our modern society than conservative students. This idea is supported by the other finding that students in the liberal seminary did express significantly more favorable reactions to blindness than those in the two conservative seminaries.

Significant differences were indicated between these groups on the Authoritarian Virtuousness and Distressed Identification dimensions. Conservative students scored significantly lower than liberal students on these dimensions.

Siller and his associates (1967, XII) indicated that the Authoritarian Virtuousness factor is ostensibly "pro-disabled", projecting an image of the blind as having special gifts and desirable personal characteristics. Blindness is seen as improving a

person's character and blind people are described as probably closer to the really important things of life. The finding that conservative students indicated a more definite presence of the Authoritarian Virtuousness dimension is consistent with the report of Lukoff and Whiteman (1962, 1963) that positive stereotype attitudes toward blindness were found among people who maintained "fundamentalists" religious beliefs. Since conservative students in this study were determined by certain selected religious and ethical questions, conservatism here may be considered to be equivalent to religious conservativism or fundamentalism. This relationship is also supported by the other finding that students in the liberal seminary, F, scored significantly higher than those in the other five seminaries on this attitudinal dimension.

According to Siller and his associates (1967, XII), Distressed Identification involves highly personalized reactions to blindness serving as a stimulus which activates anxiety about the respondent's own vulnerability. This dimension may have indirectly examined the idea that blindness is punishment for a sin. In responding to some items of this dimension, the subjects might have imagined that they would become blinded because of failures in their religious and moral practices. A person with a lower score on this factor compared to a person with a higher score tends to express more agreement with items such as, "seeing someone who is blind makes me worry about becoming blind myself;" "I am sometimes afraid I will become blind;" and "If I were blind, I think I would feel like hiding and avoiding people." If it is so, it may be that conservative students exhibit the presence of

Distressed Identification more than liberal students merely because of the literal interpretation of the Bible. This idea is supported by the other finding that the third-year seminarians who were assumed to be more exposed to the Bible, indicated more definite presence of the Distressed Identification dimension than did the first-year seminary students.

An alternative explanation may be that this difference is due to distinct personality structures of conservative and liberal students. English (1971) presented data which indicated negative attitudes toward blind persons were part of a broader personality dimension.

Some limitations of the selected items from PVI were noted. Eleven seminary students and two education students questioned the validity of the instrument for measuring their ethical and religious values. They commented that none of the five choices of each item came close to what they believed. For this reason, most of them chose not to answer these five questions. Another limitation of the instrument was found in the examination of the internal consistency reliability. For the five items the coefficient alpha was .63. However, one item (see item number 1 of Appendix B) had a very low correlation with the other four. The coefficient alpha of the other four items was up to .73. Interestingly enough, this negatively discriminating item was most often criticized by some subjects.

C. Sex Differences in Reaction to Blindness

Significant sex difference on the total scale score was found in the present study. Female students reacted to blindness more favorably than male students. This finding coincides with those of

Cowen, et al. (1958), Javin (1965), Jordan (1968), Siller and Chipman (1964b), Siller, et al. (1967, XI; XII), and Yuker, et al. (1966) who also reported that females have more favorable attitudes toward disabled people than do males.

The majority of the females were education students while the majority of the males were theological students. Therefore, it was necessary to inspect sex differences within seminary and education student groups respectively. The data indicated consistent sex differences between education males and females and between seminary males and females. Seminary female students had somewhat higher means than education female students. But no significant interactions were found. Most of the seminary female students were from the seminary F.

Further analysis of the seven factor scores between male and female student groups indicated that female students obtained significantly higher means than male students on five factors, except for the Rejection of Intimacy and Inferred Emotional Consequences dimensions. Since it was found that seminary students obtained a significantly higher mean on the Rejection of Intimacy dimension than education students, this difference may account for lack of sex difference on this dimension. Examination of the mean scores on this attitude dimension among four subgroups (education males and females, seminary males and females) clearly indicates that the difference on this factor is primarily a function of type of education rather than sex. Mean scores on this factor among the four subgroups were education males 52, education females 52.9, seminary males 55, and seminary females 58.

As for the Inferred Emotional Consequences, females showed a tendency to react more favorably than males even though it was not statistically significant.

D. Differences in Reactions to Blindness between the First and Third Year Seminary Student Groups

There was no significant difference between the first and third-year seminary student groups on the total scale score of the DFS-B. However, inspection of these means indicated a tendency for the first-year seminary students to react more favorably than the third-year seminary students. (The first-year students had the mean of 492 while the third-year students obtained the average score of 479.)

Significant differences on the Rejection of Intimacy and Distressed Identification factors between these groups were found. Third-year seminary students scored significantly lower than the first-year seminary students on these attitude dimensions. It suggests that seminary training may be positively related to unfavorable reactions to the two attitude dimensions. The first-year seminarians participating in this study were all beginning students at the time the research instrument was administered to them. These findings also support some studies (Allport & Ross, 1967; Jordan, 1968; Rokeach, 1969; Sorrentino & Hardy, 1972) which indicated that religious people were more prejudiced than less religious and nonreligious people.

E. Relationships between Age and Reactions to Blindness

Pearson Product Moment correlations demonstrated no significant relationships between ages of the subjects and the seven factor scores and total scale score of the DFS-B. Homogeneity of ages of the subjects may account for this lack of relationship. Ages of the subjects

ranged from 21 to 56 years with the mean of 27.1059 and the standard deviation of 6.3974. Three students were in their fifties and the ages of the other subjects ranged from 21 to 37 years.

F. Differences in Reactions to Blindness Among the Six Selected Seminaries

Significant differences on attitudes toward blindness among the six seminaries were found. There was also a significant pair difference between seminary F and seminaries A and E. This difference may be interpreted in relationship to the previous findings. A and E seminarians identify themselves as fundamentalists, while the F seminarians designated themselves as liberals.[2] Therefore, this pair difference is consistent with the previous finding that conservative students have more unfavorable attitudes toward blindness. This further suggests that self identification may be useful in determining conservative vs. liberal religious values. This self-identification method is supported by mean scores obtained from the seminaries on the five items from PVI (see Appendix C). Very favorable reactions to blindness of the F seminarians may be due to combined functions of their liberal religious values and sex. Approximately half of the seminary F students who participated in this study were females. Interestingly enough, students in the two Catholic seminaries expressed very similar attitudes toward blindness to those in seminary B, know as moderately liberal.

Incidentally, education students who participated in the present study obtained the mean of 480 which is similar to that of the three

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[2]Seminary professors who administered the questionnaire were asked to identify whether their seminary was liberal or conservative.

seminary students (B, C, and D) and considerably higher than that of the two fundamental seminaries and lower than that of the liberal seminary students. This suggests that the lack of overall or total score differences on attitudes toward blindness between education and theological student groups may be due to inadequate definition of "theological students." "Theological students" is not a homogeneous classification. The two "conservative" seminaries probably hold views that are more closely aligned with a literal interpretation of the Bible. If so, their lower scores on the DFS-B may reflect a consistency with the Old Testament attitudes toward blindness.

In addition, there were significant differences on the Authoritarian Virtuousness dimension among the six seminaries. On this dimension, seminary F students had the highest mean of 69 and the students in the other five seminaries obtained similar mean scores (around 62). Post Hoc comparison results indicated significant difference between seminary F and the other five seminaries. Since seminary F is considered to be more liberal than the other five seminaries, this finding coincides with that of Lukoff and Whiteman (1962, 1963) who reported that positive stereotyping attitudes toward blindness were found among people maintaining "fundamentalists" religious beliefs. The Authoritarian Virtuousness dimension reflects some aspects of positive attitudes toward blindness. This also supports the previous finding that conservative students indicated significantly more definite presence of the Authoritarian Virtuousness dimension than did liberal students.

V. CONCLUSIONS AND IMPLICATIONS

A. Conclusions

Investigation of the four hypotheses and three research questions resulted in the following conclusions:

1. Graduate students in theology did not significantly differ from education graduate students in their overall reactions to blindness.

2. Education students revealed significantly more definite presence of the Rejection of Intimacy factor than theological students.

3. Conservative students expressed significantly more unfavorable reactions to blindness than liberal students.

4. Conservative students expressed significantly more definite presence of the Authoritarian Virtuousness and Distressed Identification factors than liberal students.

5. Female students did express significantly more favorable overall attitudes toward blindness than male students.

6. Female students did significantly differ from male students in the degree to which they revealed the presence of the five attitude dimensions: Interaction Strain, Generalized Rejection, Authoritarian Virtuousness, Distressed Identification, and Imputed Functional Limitations.

7. The third-year seminary students indicated significantly more definite presence of the Rejection of Intimacy and Distressed Identification than the first-year seminary students.

8. Age of the subjects did not significantly correlate with attitudes toward blindness.

9. Students in the two conservative seminaries expressed significantly more unfavorable attitudes toward blindness than did those in the liberal seminary.

10. Students in the five seminaries showed significantly more definite presence of Authoritarian Virtuousness dimension than those in the liberal seminary.

B. Implications of the Study and Suggestions for Future Research

The primary purpose of the study was to determine certain religious and Biblical influences on attitudes toward blindness among theological students by selecting education students as a comparison group. It was discovered generally that seminary students did not differ from education students in attitudes toward blindness expressed on DFS-B. One possible implication of this finding may be that modern theological students are influenced very little by unfavorable attitudes toward blindness reflected in the Old Testament.

However, it was found that seminary students reacted significantly more favorably to the Rejection of Intimacy dimension than education students. This favorable reaction may be the reflection of mercy, charity, and acceptance for blind people shown by Jesus in the New Testament. If it is so, this may imply that seminary students are influenced much more by the New Testament than by the Old Testament in regards to their attitudes toward the blind. Future research should compare attitudes of Jewish seminarians toward blindness with those of Protestant and Catholic seminary students to determine separate influences of the

Old and New Testaments. An additional implication of this finding is that educators may reject intimate relationships with their blind children and youth who are enrolled in public schools. If such unfavorable reactions do occur in their classrooms, then the impact of this type of rejection on blind children and youth must be investigated and educators should be aware of the existence and the effect of this type of rejection.

The fact that conservative students did express more unfavorable attitudes toward blindness and indicated more definite presence of the Authoritarian Virtuousness and Distressed Identification dimensions than liberal students, implies that fundamental religious and ethical conservatism is positively related to unfavorable attitudes toward blindness and to authoritarianism. Limitations of the research instrument which were used to define conservative and liberal values in the present study, suggest further research in this area is needed.

Similarly, significant differences on attitudes toward blindness and the Authoritarian Virtuousness dimension among the selected seminaries support the positive relationship between religious conservatism and unfavorable attitudes toward blindness, and between religious conservatism and authoritarian virtuousness. F seminarians designated as liberal, reacted significantly more favorably to blindness and the Authoritarian Virtuousness dimension than did A and E seminarians, known as fundamentalists. These seminary differences raise one serious methodological question with regard to definition and sampling procedures of "theological students". Much additional research should be

done on this methodological problem in investigating certain religious and biblical influences on attitudes of seminary students toward blind people.

The third-year seminary students indicated more definite presence of Rejection of Intimacy and Distressed Identification factors than the first-year seminarians. One disturbing implication of this finding is that seminary training is positively related to unfavorable reactions to these dimensions. This further implies a need for changes of religious materials concerning blindness and blind people. But due to the limited number of subjects who participated in this analysis, further study is recommended to investigate the comparisons of years of seminary training with attitudes toward blindness.

It was found that female students expressed significantly more favorable attitudes toward blindness than male students. This finding may imply that female teachers are more effective in educating visually handicapped children and youth in their regular classrooms, and female theologians are more effective in their pastoral ministry for the blind, than their male counterparts. Future research should investigate relationships between favorable attitudes toward blindness and effectiveness of teaching blind children and youth or pastoral ministry for blind people.

Lack of significant relationship between age and attitudes toward blindness implies that age is not an important variable for determining attitudes toward blindness.

One final implication of the present study is that attitudes toward blind people are multi-dimensional in nature. This then lends

support to the probability conceptualization of attitudes as expressed by Fuson (1942) and by Campbell (1950).

VI. SUMMARY

The present study investigated attitudes toward blindness among graduate students in education and theology. The hypotheses and research questions related to: differences in attitudes toward blindness between education and seminary student groups; differences in attitudes toward blindness between conservative and liberal student groups; differences in attitudes toward blindness between the first- and third-year seminary student groups; differences in attitudes toward blindness among student groups of the selected seminaries; sex differences in attitudes toward blindness; and relationships between age and attitudes toward blindness.

The subjects for this study included 213 graduate students in education who were enrolled in courses in educational research at the University of Pittsburgh and 175 graduate-level theological students who were enrolled in the six selected seminaries in the Fall Term of the 1975-1976 academic year. The Disability Factor Scale-Blindness (DFS-B) and selected items from the Polyphasic Value Inventory (PVI) were administered to all subjects to measure attitudes toward blindness and to determine the extent of conservatism-liberalism in certain selected religious and ethical values.

The analysis of variance results indicated no significant differences in attitudes toward blindness between education and seminary student groups. But the analysis of the seven factor scores of the DFS-B revealed that education students indicated significantly more definite

presence of the Rejection of Intimacy factor. Liberal students expressed significantly more favorable attitudes toward blindness than did conservative students. It was also found that conservative students indicated significantly more definite presence of the Authoritarian Virtuousness and Distressed Identification dimensions.

The results also showed that the third-year seminary students indicated significantly more definite presence of the Rejection of Intimacy and Distressed Identification dimensions than the first-year seminary students. It was found that there were significant differences on the total scale score and the Authoritarian Virtuousness dimension of the DFS-B among student groups of the six seminaries. Scheffe's Post Hoc pair comparison results showed that students in the liberal seminary expressed more favorable attitudes toward blindness than those in the two conservative seminaries, and students in this liberal seminary also indicated less definite presence of the Authoritarian Virtuousness dimension than those in the other five seminaries. The analysis of variance of sex differences revealed that female students expressed significantly more favorable reactions to blindness than male students. Pearson Product Moment between age and attitudes toward blindness yielded no significant relationships.

It was concluded that theological students did not differ from education students in their attitudes toward blindness except for the Rejection of Intimacy factor. It was also concluded that liberal students expressed significantly more favorable attitudes toward blindness than conservative students; and students in the liberal seminary showed significantly more favorable attitudes toward blindness than those in the two conservative seminaries, and the third-year seminary students

indicated significantly more definite presence of the Rejection of Intimacy and Distressed Identification dimensions than the first-year seminary students. In addition, it was concluded that there were sex differences in attitudes toward blindness and that age was not correlated to attitudes toward blindness.

Among the implications discussed were the following: first, there is little influence of negative attitudes toward blindness reflected in the Old Testament on attitudes of theological students toward blindness; second, more acceptance of the theological students in intimate relationships may be interpreted as a strong reflection of acceptance and mercy of Jesus for blind persons in the New Testament; third, to the extent that education students revealed definite presence of the Rejection of Intimacy dimension, impact of this type of rejection on public education of the blind children and youth should be investigated; fourth, there is an indication that religious conservatism and seminary training are positively related to unfavorable attitudes toward blindness, which suggests a need for changes of religious materials concerning blindness and blind people; fifth, sex differences in attitudes toward blindness must be recognized in any effort to develop special education and rehabilitation for the blind; and finally, attitudes toward blindness are multi-dimensional in nature.

APPENDICES

APPENDIX A

PERSONAL OPINION INVENTORY

Instructions:

On the following pages, you will find statements of ideas and attitudes about blind people. There are many different opinions about this subject. People agree with some of these statements and disagree with others. We would like to know what you think about each one. There are no right or wrong answers: we are interested only in your opinions. Please make a choice for every statement.

There are six choices on each statement, as follows:

1	2	3	4	5	6
Strongly Agree	Agree	Not Sure, but Tend to Agree	Not Sure, but Tend to Disagree	Disagree	Strongly Disagree

On the IBM answer sheet, mark the choice that comes closest to how you feel about the statement. For example, if you strongly agree with a statement, mark 1; if you are not sure, but tend to disagree, mark 4. It is very important that you answer every item.

On the answer sheet, please indicate in the space at the top:

Sex, Age, Year of Study, Country of Birth

1. I would feel very uncomfortable with a blind person if he talked to me about his blindness.

2. The blind can't eat without being messy.

3. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.

4. A mother who is blind would find it practically impossible to take care of a child without the help of a person who can see.

5. Blind people probably are less informed than others.

6. The blind are often angry at the world.

7. I would go out of my way to be friendly with a blind person.

8. A blind person would be unable to do a good job as a doctor.

9. I would have no objection to having my body used for scientific research after I die.

10. I feel that a blind person must have done something to deserve losing his sight.

11. I think I would feel somewhat uncomfortable introducing a blind friend to other people.

12. When I see a blind person, I get a sickish feeling in my stomach.

13. Blindness tends to improve a person's character.

14. I would feel that because a blind person can't see me, he would never really know me.

15. Blind people are as capable as anyone else.

16. Blind people are often on the lookout for insults.

17. I would never adopt a child who was blind.

18. Many people would think that there was something wrong with someone who had a blind person as a close friend.

19. I think that there should be laws against marriage between two blind people.

20. If it could help a blind child see, I would leave my eyes to him in my will.

21. Blind people tend to be more talented musically than normal people.

22. Most blind people are emotionally well-adjusted.

23. The people who are most concerned with helping the blind are bleeding-heart-do-gooders.

24. I sometimes am afraid I will become blind.

25. I would be uncomfortable being seen with a blind person.

26. I imagine many blind people use their blindness to take advantage of others.

27. I would never vote for a blind man for President.

28. When I see a blind person in the street, I am tempted to stare.

29. I would be willing to hire a blind person for any job that did not specifically require seeing.

30. Blind children are usually more friendly than other children.

31. I would rather be dead than blind.

32. I would date a blind person as readily as I would anyone else.

33. I would not be willing to take a job if I had to work with a co-worker who was blind.

34. I would prefer to avoid contact with the blind.

35. Blind people tend to get a more accurate first impression of others than do most people.

36. Blind children probably think they are not as good as normal children.

37. The blind are just as intelligent as normal people.

38. I would be willing to have a blind person as a close friend.

39. The blind are capable of doing most jobs.

40. Seeing someone who is blind makes me worry about becoming blind myself.

41. Most parents would really prefer that their child not have a blind child as a close friend.

42. I think a blind person would be unable to do a good job as a fiction writer.

43. I am more sympathetic than most toward blind people.

44. I would not be at all reluctant to have a blind lawyer represent me in court.

45. I would be afraid of saying the wrong thing in talking to a blind person.

46. The blind have a whole set of feelings which cannot be understood by most other people.

47. Blind children would have a bad effect on normal children if they were in the same class.

48. Because they know each other's problems better, the blind can put their trust in other disabled people more than in those not disabled.

49. There is a limit as to how successful any blind person can be.

50. I would be upset at the idea of spending an evening with a blind person.

51. Blind people and normal people can't really understand each other.

52. Many blind people do dangerous things because they won't accept help.

53. When I see a blind child, I feel especially warm toward him.

54. Even if I fell in love with a blind person, I don't think I would actually be willing to marry that person.

55. Blind people ought to be kept apart from the normal community.

56. A blind person would be unable to do a good job as a lawyer.

57. Blind people are unusually neat in appearance.

58. When I see a blind person, I try to imagine what it is like to be blind.

59. Most small children probably are afraid of blind people.

60. The blind are best off staying among themselves.

61. My first reaction in meeting a blind person is a feeling of pity.

62. If I introduced a blind acquaintance to my friends, I think they would feel uneasy in the situation.

63. Blind people tend to develop special abilities.

64. I must admit, I often get a feeling of revulsion when I see a blind person.

65. Generally speaking, I think blind children should be kept out of schools for normal children.

66. I would probably be nervous with a blind person.

67. A blind person would be unable to do a good job as a politician.

68. Blind people are pretty much like everybody else after you get to know them.

69. If I were blind, I think I would feel like hiding and avoiding people.

70. Most blind people are bitter.

71. Obedience and respect for authority are the most important virtues children should learn.

72. I would rather not have any children than have a child who is blind.

73. If I had a blind acquaintance, I would hesitate to bring up the subject of jobs.

74. I don't think I could fall in love with a blind person.

75. I feel uneasy when I come near a blind person.

76. The blind feel sorry for themselves.

77. I very often feel nervous when I meet a new person.

78. If I had a blind acquaintance, I would hesitate to bring up the subject of sex.

79. Blind people, inside, are somewhat repelled by the blind.

80. Many blind people are mean and nasty.

81. A blind person is able to do about as well as anyone in most areas of life.

82. The blind have unusually good memories.

83. Most people, inside, are somewhat repelled by the blind.

84. I would be uncomfortable about offering help to a blind person because he might resent it.

85. One of the things I fear most is being abandoned in an emergency.

86. I think if I were blind, I could make as many real friends as I do now.

87. There must be something the matter with someone who marries a blind person.

88. Most people would be somewhat embarrassed being seen with a blind person.

89. Blind people who seem outwardly adjusted are often inwardly unhappy.

90. One of the worst things about blindness is that it leaves you defenseless.

91. Blind people are very unpredictable.

92. It is not right to show annoyance to a blind person.

93. Blind people need help with many daily activities.

94. There is something frightening about the way blind people look.

95. The blind think they ought to be treated better than other people.

96. Generally speaking, blind people tend to be irritable.

97. Seeing a blind person makes me worry about unpleasant things that might happen to me.

98. Because of their disability, blind people are probably closer to the really important things of life.

99. Someone who married a blind person might find it harder to make friends.

100. It is important to me to understand other people.

101. I think if I became blind, I could make a pretty good adjustment.

102. It must be humiliating to have to depend on others as blind people do.

103. I think I would prepare myself to meet a really different sort of person if I were told I was going to meet someone who was blind.

104. A blind person would be unable to do a good job as a grocer.

105. I feel I owe it to a blind person to be nice, because I've been luckier.

APPENDIX B

SURVEY OF CERTAIN VALUES

The following 5 items are concerned with certain values. We all think differently about these questions. Here you may make your own value judgments by choosing one of the five possible answers following each question. Please mark the choice on the answer sheet which comes closes to your value position.

1. What do you believe about the equality of men?

   (1) All men are entitled to equal opportunity to develop their capacities; however, men vary greatly in their capacities.

   (2) The notion is a fallacy; men vary greatly in ability and character; treating all men as equals is not only foolish but unjust.

   (3) Men are born equal; the differences in ability and character which exist are largely the result of differing opportunities.

   (4) Democratic government must treat all citizens as equal under the law, but that is as far as the equality of men goes.

   (5) No measure exists which can demonstrate that one man is superior to another; one must conclude that all men are equal and entitled to an equal share of the good things of life.

2. Which of these would you regard as the final authority in determining whether a particular type of conduct is ethically right or wrong?

   (1) Standards of ethical conduct are determined by each society; rules of conduct must fit the time and place.

   (2) Standards of ethical conduct are established by God and revealed in the Bible.

   (3) Each individual must be free to determine for himself the rightness or wrongness of his deeds.

   (4) Standards of ethical conduct are established by universal laws; the basic virtues such as honesty and charity do not change from one generation to the next or from one place to another.

   (5) The question is irrelevant: all actions are the result of interaction between the organism and its environment.

3. What do you believe is the true nature of God?

   (1) I believe in a Supreme Being or First Cause, but I cannot believe in a personal God.

   (2) I believe in a personal God who has revealed Himself in the Bible.

   (3) The nature of God is not (or cannot be) known by man.

   (4) There is a God, Father of all men, who is common to all religious faiths. It is not particularly important whether a man is a Christian, Jew, Moslem, Hindu, etc.

   (5) There is no God.

4. To what extent is man responsible for his deeds?

   (1) There are natural laws which determine ethical conduct, and men must observe these laws or suffer the consequences.

   (2) All men must face Devine judgment which will determine whether they spend eternity in Heaven or Hell.

   (3) Man is a member of society, and his only moral responsibility is to observe the standards established by society.

   (4) Men are responsible to God and will be held accountable for their conduct, but I cannot believe anyone will spend eternity in Hell.

   (5) Man is product of heredity and environment; he cannot be held responsible for his conduct.

5. What do you believe about the Bible?

   (1) It is an inspired religious book similar to other religious writings which direct men's thoughts toward God.

   (2) It is the inspired Word of God, unquestionable authority in religious faith and practice.

   (3) It is a great literary effort by a primitive people which gives much insight to their history and beliefs.

   (4) It contains God's message to men, but not all of it can be regarded as completely reliable.

   (5) It is a fraud which deludes men.

APPENDIX C

Means and Standard Deviations on Five Selected Items From PVI for Education and Seminary Students

School	Sample Size	Mean	Standard Deviation
Education	184	14.516	3.076
Seminary A[a]			
Seminary B	13	9.769	3.586
Seminary C	33	12.152	2.763
Seminary D	41	11.780	2.372
Seminary E	13	8.385	1.805
Seminary F	45	12.933	3.201

[a]Students in Seminary A did not respond to the items.

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